

## Some Aspects of the Marketing of Milk in Northern Ireland

By D. L. ARMSTRONG, B.Com.Sc., Ph.D.

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### *Introduction*

Though the milk bottle and the milkman are familiar sights it is doubtful if the general public ever give much thought to the complex organisation which ensures the daily delivery of milk to some 338,000 households in Northern Ireland. And this is only one aspect though a very important one of the milk industry in Northern Ireland. What is the milk industry? Its basis is the production of milk on some 22,000 farms which means that one out of every 64 in the population is a milk producer (cows' milk of course!). A first call on the milk produced is the market for liquid milk for human consumption. The balance is utilised in the manufacture of dairy products in factories of varying size and complexity.

In this paper I have attempted to outline the growth of the industry, to describe its present state, to show the part played by the Milk Marketing Board for Northern Ireland and to point to some of the problems which face the industry. The paper thus covers a wide field and is for this reason of a general nature. I thought, however, that a general survey would be of greater interest to the members of the Society than a more detailed examination of some particular problems.

### *The Development of the Industry.*

The production of milk has always been an important aspect of the agricultural economy of Northern Ireland but in the years before the second world war the development of the industry was hindered by the lack of organised marketing. In 1938, total production of milk in Northern Ireland was about 38 million gallons. Of this total about 15 million gallons were utilised for liquid consumption and the balance was manufactured into butter and cream, a considerable proportion of which was exported to Great Britain.

The outbreak of war was followed by a period of expansion and development. Total production of milk rose from 38 million gallons in 1938 to 46 million gallons in 1942 and 67 million gallons in 1946. The liquid market steadily expanded as appreciation of the value of milk as a food in a time of food shortage grew. By 1942 consumption of milk in liquid form in Northern Ireland had increased to 22 million gallons, compared with 15 million gallons in 1938. The all time peak of liquid milk consumption was reached in 1949 when the total was 41 million gallons.

On the manufacturing side a major reorganisation took place. In 1939 there were 105 creameries in Northern Ireland, including auxiliaries. The function of auxiliaries was to take milk from the producer, separate it and send the cream to the centre where butter was produced. The separated or skim milk was normally returned to the producers. These creameries had been the mainstay of the manufacturing side of the industry for many years but circumstances had changed and the time was ripe for a measure of concentration. A concentration scheme was organised by the Ministry of Agriculture as a result of which 91 creameries including auxiliaries, were closed down. The arrangements for the collection of milk were also rationalised.

While some units were closed, new factories were built. Eight receiving centres were opened by the Ministry of Agriculture. These centres, in addition to acting as feeders for the factories, were also equipped to churn milk and dry skim milk in order to provide flexibility. Nestle's first factory, a converted creamery at Ballymoney, was opened in 1938. Condenseries at Omagh and Castledawson were opened in 1942 and 1948 respectively and a chocolate crumb factory at Victoria Bridge in 1952. Bovril opened a cheese factory at Magheralin near Lurgan in 1947 and the C.W.S. a large condensery at Tullygoonigan in 1949. Bengers (now Fisons Milk Products Ltd.) took over a disused potato drying factory at Coleraine in 1948 and equipped it for the production of butter, casein and milk powder. In a relatively short space of time and in spite of many difficulties the face of the milk industry in Northern Ireland was completely altered. Modern factories equipped for the production of a wide range of products—condensed milk, sweetened and unsweetened, full cream and skimmed, evaporated milk, cheese, milk powder, skim milk powder, casein, sterilised cream and chocolate crumb—were introduced. The foundation of the milk industry in Northern Ireland as it is to-day was laid in those years under the stimulus of war time needs. Full credit is due to the Ministry of Agriculture for the way in which they seized the opportunity which fate presented.

The development of the industry during the war period is illustrated in the following table;—

TABLE I.

Year	Size of dairy herd	Total sales off farms	Liquid Market (including milk shipped to Scotland)	Total Manufacture
	Thousand	Million Gallons		
1938 ..	259.3	38.337	14.946	23.391
1946 ..	346.5	66.756	40.028	26.728

This period also saw other developments of great importance to the future of the industry. As part of the general mobilisation of the nation's resources to meet war time needs, the Ministry of Agriculture were empowered as agents of the Ministry of Food to purchase all milk produced in Northern Ireland and to direct its utilisation. In order to stimulate production guaranteed prices were also introduced. At the same time measures were taken to improve the quality of milk. The Ministry of Agriculture as the purchaser of milk from the farm graded all milk at the receiving centres. Milk of inferior quality was downgraded and the producer paid a lower price for it. This policy led to a marked improvement in the quality of milk and laid the basis of the complete arrangements now existing for the control of milk quality.

### *From the Farm to the Consumer*

Having outlined briefly the development of the industry it will be helpful at this stage to give some indication of its present scope and the steps in the marketing of milk. This can be done by following the passage of milk from the farm to the consumer. For convenience I refer throughout to statistics for the year ended 31st March, 1958. There are 22,000 registered milk producers in Northern Ireland producing for sale 111½ million gallons of milk. (It may be noted that total production is a higher figure as an unknown quantity of milk is retained on the farm for household use and stockfeeding.) The producer places the milk in churns which are collected daily at specified times and collection points on 526 routes by 213 hauliers. The hauliers deliver the milk to 35 buyers of ex-farm milk. These buyers, which include the Board, examine the milk carefully and carry out a series of tests to ensure that the milk is of the standard required. Seventy-eight and half million gallons is utilised by these buyers. The balance is moved in bulk by tanker, after being cooled, to buyers whose ex-farm supplies are inadequate to meet their needs. To make this point clear the ex-farm supplies of some buyers are greater than their requirements. Each day the Board's marketing department ensures that every gallon of milk is sold and that each buyer receives the quantity of milk which he has agreed to purchase at the time when he requires it. This is a task of considerable magnitude particularly in view of the fluctuations which occur in both the production of milk and the requirements of buyers.

The utilisation of the milk may now be examined. The liquid market absorbs about 36 million gallons (twice the pre-war figure).

Milk for the liquid market must be either pasteurised or from Grade A (T.T.) farms. The process of pasteurisation is carried out by a limited number of businesses who may sell the milk either by retail or by wholesale to sub-distributors. There are over 2,000 sub-distributors in Northern Ireland most of them comparatively small businesses. Grade A (T.T.) milk for liquid consumption must be bottled on the farm and is sold either direct to the consumer by the producer or to a sub-distributor.

The balance of 75½ million gallons is used in the manufacture of milk products. The gallonage used for the various products is shown in the following table:—

	Million Gallons
Butter .. .. .	33·70
Cream (fresh) .. .. .	0·39
Condensed milk .. .. .	4·76
Evaporated milk .. .. .	9·23
Wholemilk powder .. .. .	15·75
Cheese .. .. .	5·41
Sterilised cream .. .. .	2·67
Chocolate crumb .. .. .	2·86
Ice-cream .. .. .	·21
Creamed rice .. .. .	·11
Frozen Milk .. .. .	·05
Miscellaneous .. .. .	·14
<b>Total Manufacture .. .. .</b>	<b>75·28</b>

All the butter and about 37 per cent. of the cheese is consumed locally. Most of the condensed and evaporated milk and milk powder is exported. No fresh cream is exported but small quantities of ice cream are exported to Great Britain.

In addition the separation of milk for cream and butter produced approximately 33 million gallons of skim milk, part of which was utilised for stockfeeding, part dried into powder, and part used for standardising milk products.

A comparison of the utilisation of milk in Northern Ireland with that in England and Wales is instructive. Total sales off farms in England and Wales are 1,877 million gallons. Of this total 71 per cent. is used in the liquid market compared with 32·3 per cent. in Northern Ireland. It can be seen that the manufacture of milk products is relatively of much greater importance in Northern Ireland.

#### *Developments in the Organisation of Marketing*

The emergency of war showed once again the vital importance of agriculture to the nation. During the war farmers benefited from assured markets and guaranteed prices and in return increased agricultural production by 24 per cent.—a tremendous achievement. At the end of the war the Farmers' Unions turned their minds to securing for peace the benefits of war. The Government and the nation were in a receptive mood and the Agricultural Act 1947 was passed. This Act has been described as the farmers' charter and provided for assured markets and guaranteed prices for certain staple agricultural commodities including milk. Since its passage the Act has been interpreted in various ways but has remained the foundation of the guaranteed prices system.

The agony of farmers in the twenties and earlier thirties produced the Agricultural Marketing Act of 1931 which was of United Kingdom application. In 1933 the Parliament of Northern

Ireland passed the Agricultural Marketing Act. Under the marketing legislation milk marketing boards were set up in Great Britain and the Pigs Marketing Board was set up in Northern Ireland. Significantly no milk marketing board was set up in Northern Ireland. The Milk and Milk Products Act 1934 however, made provisions for the setting up of a Joint Milk Council in Northern Ireland and a Butter and Cream Marketing Board. Both bodies functioned until the outbreak of war. The Joint Milk Council was concerned with endeavouring to secure producers a better return for their milk. Its powers and resources were, however, limited and it could not cope with the fundamental problem of the wide disparity between the price of milk used for liquid consumption and the price of milk for manufacturing purposes. The Butter and Cream Marketing Board did much to improve the quality of and develop the market for butter and cream.

The milk marketing boards in Great Britain, though they had at times a stormy passage, made steady progress and became firmly established. A factor making for success in their case was the more diversified markets for milk and in particular the relatively large market for liquid milk.

During the war the powers of the milk marketing boards were suspended but they continued in being in the capacity of agents for the Ministry of Food.

When the Conservative party took office in 1951 they began to dismantle the war time control of food distribution. As part of this process the Government decided in 1953 to restore the powers of the marketing boards with effect from 1st April, 1954. This decision stimulated discussions already taking place on the future of milk marketing in Northern Ireland. The Ulster Farmers' Union took the view that a producers' marketing board similar to those which had proved so successful in England, should be established. In Great Britain the initiative in framing schemes rests with the producers but in Northern Ireland the marketing legislation places the responsibility on the Ministry of Agriculture. On 23rd March, 1955, the Ministry issued the Milk Marketing Scheme (Northern Ireland) (Approval) Order, approving the Milk Marketing Scheme and providing for it to come into operation on 1st April, 1955. The Ministry continued to be responsible for the marketing of milk in Northern Ireland up to that date. It is interesting to note the circumstances which made it possible to set up a marketing board for milk in Northern Ireland in 1955. The essential point was that in 1955 there was a guaranteed price for milk regardless of the purpose for which it was utilised. This made possible the adoption of the pool price principle i.e. that each producer would receive the same price for his milk whether it went to the liquid or manufacturing market. Points which also favoured a marketing board in 1955 were the experience gained during the war in organised marketing of milk and the diversification of the industry in Northern Ireland.

It would be tedious to review the provisions of the marketing acts and the provisions of the milk marketing scheme. For this purpose it will be sufficient to describe the main powers of the Board and the manner in which it operates.

The Board itself consists of thirteen members, ten of whom are elected by registered milk producers and three of whom are appointed by the Ministry of Agriculture. The scheme provides for the appointment of the Chairman by the Ministry of Agriculture for an initial two year period. After the expiry of that period the Chairman is elected by the members. Apart from the three members appointed by the Ministry the members of the Board are farmers.

All producers who wish to sell milk must be in possession of a licence to produce milk and must be registered with the Board. The licensing procedure is controlled by the Ministry of Agriculture under the Milk Act 1950 and is designed to ensure reasonable standards in the production of milk on the farm. A producer cannot be registered with the Board unless he possesses a valid producer's licence. All registered producers must sell milk either to or through the agency of the Board. The Board is therefore the first purchaser of all milk offered for sale. The Board, however, only takes physical possession of about 20 per cent. of the milk at its own factories of which there are now six. The balance passes directly into the hands of buyers. Under the contracts between the producer, the board and the buyer, there is a simultaneous passing of property, subject to the buyer's and the Board's right to reject milk which is not of the standard required. The contractual position is complicated on paper but works exceedingly well in practice.

In addition to having the power to buy and sell milk, the Board has wide powers with respect to the transport of milk, the manufacture of milk products and sales promotion.

Payment for all milk is made by the Board to the producer and buyers make payment to the Board on the basis of prices which vary according to the purpose for which the milk is used. The Board is responsible for the administration of the guaranteed prices for milk. The subsidy due is paid by the Government to the Board who take it into account in determining the prices payable to producers. The Board is required to consult buyers of milk on matters relating to prices and contracts and for this purpose a Joint Committee representative of the Board and buyers has been established. Informal consultation also takes place with the representatives of buyers and producers on a wide range of matters of common concern.

The task which faced the Board on its establishment was an onerous one. It had almost overnight to take control of a large and complex organisation. One of the first steps taken by the Board was to acquire from the Government the six milk depôts which had been erected during the war and a transport fleet of some 100 vehicles used mainly in the collection of milk. Immediate steps had to be taken to recruit staff and in general to create an administrative machine. It is a remarkable tribute to the Board that it was able to take over responsibility for the marketing of milk without any breaks occurring in the arrangements for the collection of milk, the payment of producers, and the supply of milk to the liquid market and the various factories.

*The Price Structure*

It is appropriate to begin a description of the price structure with the price paid to producers. Though there was some measure of financial assistance to agriculture in pre-war years, the present system of guaranteed prices was born under the stress of war-time requirements. Reference has already been made to the Agriculture Act 1947. Under this Act provision is made for a guaranteed price for milk and certain other products. At the annual review of farm prices which normally takes place in February each year, the Government determines the guaranteed average price for milk in the year commencing 1st April following the review. This price is a guarantee to the Board on behalf of producers. It is not an unlimited guarantee as it applies only to the Standard Quantity which for Northern Ireland is 95 million gallons, and as the Board is under an obligation to obtain the best possible return from the market. The subsidy actually payable may be defined simply as the amount by which the total obtained by multiplying the standard quantity by the guaranteed price exceeds the amount received by the Board for the sale of milk. This is a simplified definition and ignores certain complications such as the profit and loss sharing arrangement built into the guarantee. The actual amount which the Board can pay producers depends on the level of the standard quantity (this has not been altered since the Board was set up) the guaranteed price, total sales off farms and the amount which the Board can realise on sales of milk. Essentially on milk in excess of the standard quantity the Board can pay only to producers the amount which it realises on the sale of that milk in the manufacturing market. Thus production in excess of the standard quantity lowers the average price payable to producers. The guaranteed price for milk and the average price actually paid to producers in each year since the Board was established is shown in the following table:—

Year ended	Guaranteed Average Price Pence per gallon	Actual Average Price paid Pence per gallon
		(Gross)
31st March, 1956 ..	36.66d.	35.99d.
31st March, 1957 ..	37.16d.	35.12d.
31st March, 1958 ..	37.41d.	34.27d.

At the beginning of each price year the Board estimates total sales off farms and total net income for the year. The estimate of net income involves forecasts about the proportions of milk which will be utilised for various purposes during the year. The most difficult factor to forecast is, however, the volume of sales off farms. No satisfactory technique for the forecasting of production has yet been devised. The major difficulties are the vital part played by the weather and the lack of essential information about the composition of the dairy herd and changes in it. Weather can

make a difference of as much as 5 million gallons in a year's production. An allowance for error in the forecast of production is made in determining the provisional producers' prices which are announced twelve months in advance. These prices are reviewed on a monthly basis as up-to-date information about production and other factors becomes available. In the twelve months ended 31st March, 1958, a series of deductions from the published provisional prices were made largely as a consequence of an increase in production beyond that forecast. In the current year on the other hand the monthly prices have been increased largely as a consequence of a fall in production greater than that estimated. The technique of reviewing prices monthly which was introduced by the Board in their second year of operation ensures that all producers are treated equitably and that they experience immediately changes in the market situation whether due to changes in the supply or demand side.

A weakness of the Board's position is that it has to deal with each year separately. This is due in part to the fact that the size of the subsidy payable to the Board is determined on an annual basis but more important to the income tax position. The Board is subject to tax in the same manner as any other business. If the Board place money to reserve it is taxable. Thus, if the Board desired to smooth out fluctuations in prices over a period of years the amounts placed to reserve in good years to build up an equalisation fund would be taxable. It is true that the money paid out is taxable in the producers' hands but all producers may not be liable to tax and in any event the total amount payable in tax is likely to be less than it would be if tax were paid by the Board.

Before commenting further on the subsidy position it is necessary to examine the manner in which the prices paid by buyers for milk are determined. The broad division between the liquid and manufacturing markets may again be made. The price of milk for human consumption as liquid milk is still the subject of Government control. The Government determine from time to time on a United Kingdom basis, the maximum retail price of liquid milk. Broadly the basis of determination is that the maximum price should correspond approximately to the sum of the average price paid to producers, the cost of margins allowed to the distributive trade and an element representing an amount to ensure an adequate reserve of milk for the liquid market to meet fluctuations in production due to weather and other factors. The Government also determine the margin payable to distributors of liquid milk. The maximum retail price less the retail margin gives the wholesale price of liquid milk which is the price paid to the Board. This price is at present  $3/11\frac{1}{2}$  per gallon. It must be emphasised that the price received by the Board for milk sold in the liquid market is completely outside the Board's control.

The prices of milk for manufacturing purposes are on the other hand negotiated between the Board and the buyers of milk. The main factors to be taken into account are the supply of milk and the demand for milk products. There is an international market for milk products and prices are subsequently affected by international changes in supply and demand. A special factor to which

the Board must have regard is that the largest milk manufacturers in Northern Ireland have also factories in Great Britain. To put the point in another way, the cost of transport from Northern Ireland to the Great Britain market is a factor of considerable importance particularly as about 80 per cent. of the total output of the factories is exported to Great Britain and elsewhere. Prices vary according to the product and the season of the year. The highest priced product is cream whether fresh or sterilised. This is followed by a group consisting of condensed milk in all forms and wholemilk powder. The prices of cheese and butter are determined by formula which take into account variations in the market price of the products and variations in the yield of solids in milk. This latter point may be illustrated by saying that the butter content of milk is lower in the summer than in the winter. The solids-not-fat content on the other hand is higher in the spring and early summer than it is in the autumn and winter. Butter is normally the lowest price outlet for milk and in the jargon of the trade is the "sink" product. Leaving aside butter, the price of which, and therefore the price of milk used in its manufacture, varies considerably, the prices of milk for manufacturing purposes range between 1/8d. and 2/1d. per gallon. Including butter, the average price realised works out about 1/5d. per gallon.

In the sale of milk the Board's objective is to sell as much as possible in the higher priced outlets and thus obtain the best possible return from the market.

The subsidy position may be briefly summarised. The subsidy on milk involves two elements. First, what is known as the general milk subsidy which is the amount incurred in guaranteeing the price to producers, and second, the subsidy involved in the various welfare milk schemes such as milk for expectant mothers and milk in schools. The general milk subsidy is the part with which I am concerned. The total of the general milk subsidy for the United Kingdom is estimated at £12·9 million for the year ended 31st March, 1958, which is 1·4 pence per gallon of total sales of milk. While this is a substantial sum of money it does not lie in the astronomical range sometimes suggested.

### *Marketing Problems*

The marketing of milk poses special problems. First, there is a large number of small units producing milk represented by 22,000 milk producers. Second, milk is a perishable commodity and must therefore be marketed on a day to day basis. Third, milk is used in the manufacture of a wide range of products, the price of which and the demand for which can and does vary considerably. Fourth, milk production varies considerably both seasonally and from year to year. Fifth, control of quality is of vital importance.

It will be appreciated that the day to day collection and sale of milk from 22,000 separate production points, many of them in inaccessible places, is a major task. Though it must be carried out on a day to day basis it can never become a routine as it is rare for the movement of milk on one day to correspond exactly with that on the previous day.

The long term trend of milk production is influenced by economic

factors but short term fluctuations which can be violent are a product of the weather which cannot be controlled. The demand for milk for manufacturing purposes can also vary considerably in the short term and may be affected by changes in supply. Thus when the supply of milk is high stocks of products increase and manufacturers seek to reduce the intake of milk until stocks have been reduced to manageable proportions. But, a period of stock reduction may be followed by a period of short supply. The position thus arises that when the supply of milk is plentiful the market may be slow and when milk is in short supply demand may be keen.

The seasonal and annual fluctuations in supply also affect the economy of the manufacturing side of the industry in that an even throughput cannot be maintained even when demand makes it possible to do so. In Northern Ireland total sales off farms in a period of four years have ranged between 98 million gallons and 111½ million gallons. About 57·3 per cent. of the milk is produced in the months April-September. Of this proportion over 54 per cent. is produced in the three months May, June and July.

The product which is most affected by variations in demand and supply is curiously one in which the entire output can always be sold—at a price. This is butter. Butter being the lowest priced outlet for milk receives in broad terms the milk which cannot be utilised for any other purpose. Thus the production of butter follows closely variations in the supply of milk. This fluctuation in the output of butter poses considerable marketing problems. The preference for Irish butter in Northern Ireland is very strong and normally Irish butter will fetch a premium over other butter. Changes in the price, however, follow closely those in the international butter market in which the predominant influence is the continental and commonwealth supplies. Butter is distinguished from other milk products by the fact that demand has varied in almost direct ratio to changes in price. Thus during the period April-June 1958, when butter prices were low, butter consumption in the United Kingdom compared with the previous quarter increased by 30 per cent. a proportion of which was at the expense of margarine. This was a desirable development from the point of view of the dairy industry but before the position could be consolidated the supply of milk and the supply of butter fell, prices rose and the consumption of margarine began to increase at the expense of butter.

It may be noted that an important factor in the butter market is the colour of butter. The Northern Ireland consumer has a strong preference for a pale coloured butter which is the normal colour of Irish butter. Commonwealth butter on the other hand is more yellow in colour. Before consumers generally will take this butter the difference in price has to be considerable. When Irish butter is in short supply the price rise tends to be high enough to encourage consumers to purchase other butter.

As skim milk is largely a by product of the separation of milk for butter, the variations in the manufacture of butter means that there are similar variations in the supply of skim milk. Skim milk presents one of the most difficult aspects of milk marketing. It is

inherently a most valuable commodity possessing many of the nutrients contained in wholemilk. Up to date its value has not been fully appreciated but it is probable that in the long term skim milk may prove to be the most valuable constituent of milk.

Skim milk in Northern Ireland is used in three main ways. First, it is the basis of the butter milk trade. Second, it is sold in liquid form for stockfeeding and third, it is dried into powder on either the roller or spray process. Skim milk powder is used mainly in the preparation of compound feedstuffs for stock. The powder market is, however, plagued by extreme price fluctuations. The price may rise or fall by as much as 50 per cent. in a short period. Because of the vagaries of the powder market the Board developed through advertising and sales promotion the use of skim milk for stock feeding. The campaign was a great success and in the middle of last summer skim sales were running at over one million gallons per month. Subsequent developments provide a further illustration of the difficulties caused by variation in production. When skim sales were running at their peak, milk production began to fall with the result that steps had to be taken to stop any further expansion.

An indication of the shape of things to come is provided by the controversy over filled milk. By the addition of vegetable fat to skim milk a substitute for wholemilk can be manufactured. This substitute, known as filled milk, while it lacks the flavour and taste of wholemilk and is not a genuine dairy product, is in widespread use in, for example, the Philippines where it has displaced evaporated milk. It is clear that there is a considerable future for filled milk particularly in areas where there is an adequate supply of vegetable fat but a shortage of protein.

The question of filled milk raises the whole question of the description of dairy products. In the view of milk producers, consumers are entitled to genuine dairy products. Cream and ice cream provide examples. Artificial cream is still much used but happily sales of fresh cream are expanding rapidly. All too often, however, the word cream does not mean cream. The same is true of ice cream. Genuine ice cream should be manufactured from milk but much of the ice cream sold to-day contains vegetable fat. The substitute product may be quite palatable but why put up with substitutes when the genuine product can be obtained? The Ministry of Agriculture, with the full support of the Board, have laid down standards for the manufacture of dairy ice cream in Northern Ireland. The extent to which it will be made will depend very largely on whether the consumer is content to put up with substitutes or whether he or she will insist on the genuine product.

The development of the liquid market is a matter of prime importance. The liquid market is the most satisfactory one and its size has a bearing on the guarantee arrangements. Reference has been made to the standard quantity. One of the factors taken into account in determining it is variations in the market for liquid milk. In England and Wales 81 per cent. of the standard quantity of milk is sold in the liquid market. In Northern Ireland the corresponding percentage is 38. The importance of expanding the liquid market is self-evident. The measures which the Board have

taken may be briefly described. They fall into two main divisions. Press advertising and editorial publicity generally is handled by the Northern Ireland Milk Publicity Council which was set up jointly by the Board and the milk Trade. The funds are contributed on an equal basis and amount to about £24,000 per annum which is 0·16 pence per gallon in terms of sale to the liquid market. The Board has a sales development department whose aim is directed at exploiting particular markets for milk. Thus a mobile milk bar is used to bring milk to agricultural shows and other outdoor events. Portable milk stands are used at other functions, such as dances, with the same object. Special attention is given to the use of milk in industry and the office, and the catering trade. The department is pioneering the use of milk vending machines in Northern Ireland. To date 18 machines have been placed in factories and offices and negotiations are in hand to instal vending machines on sites accessible to the general public. Every possible means of developing the sale of milk is explored and research is being done on such projects as flavoured milk and alternative methods of packaging milk such as tetra pak.

Sales promotion in milk, the demand for which is comparatively inelastic, is an uphill struggle but progress is being made. The course of liquid milk consumption in Northern Ireland is shown in the table below :—

CHANGES IN LIQUID MILK CONSUMPTION IN NORTHERN IRELAND.

	1957 Million gallons	1958 Million gallons	% Increase
July .. .. .	2·856	2·883	0·9
August .. .. .	2·921	2·941	0·7
September .. .. .	3·007	3·097	3·0
October .. .. .	3·053	3·148	3·1
November .. .. .	2·979	3·039	2·0
December .. .. .	2·982	3·075	3·1

It will be noted that in the past few months liquid consumption has shown a tendency to expand. When regard is had to the degree of unemployment in Northern Ireland this is an encouraging result but whether the upward trend can be maintained if unemployment rises is a matter of conjecture. The results obtained to date of first reversing the downward trend and second, producing an increase do however show that advertising and sales promotion can bring results even with an unbranded household necessity.

#### *The Control of Milk Quality*

A matter to which the Board has given close attention since its foundation is the improvement of milk quality. The quality of milk in Northern Ireland is already of high standard and it may be mentioned that the Northern Ireland Ministry of Agriculture led the way in the United Kingdom in the introduction of a safe milk

policy. The Board takes the view, however, with the full support of the industry as a whole, that there can be no standing still on quality. Machinery has been established embracing all aspects of the industry to consider and introduce means to improve the quality of milk. All milk sold in Northern Ireland is regularly tested for both hygienic and compositional quality in accordance with a standard routine and tests. The testing machinery is regularly reviewed to ensure that it is operating efficiently. The Board has in operation schemes under which producers who supply unsatisfactory milk receive a lower price for it. Such milk is not permitted to enter the liquid market but is salvaged for manufacturing purposes.

The Board has recently taken a decision of great importance in the field of quality. It has decided in principle to pay producers for milk on a quality basis including both compositional and hygienic aspects. This will provide producers with a direct monetary incentive to improve the quality of milk. The Northern Ireland Board in taking this decision is leading the way in the United Kingdom.

#### *The Importance of the Industry and the Value of the Board's Contribution*

In conclusion an attempt may be made to assess the importance of the industry and the value of the Board's contribution to its development.

There are no reliable figures relating to capital or the numbers employed in the milk industry. There are, as has been mentioned, 22,000 milk producers who obtain either the whole or a significant part of their income from milk. I have estimated the number employed in the transport, processing and distribution of milk, and the manufacture of milk products at between 6,000 and 7,000. This is not the complete story. Though it is impossible to make an estimate much business and employment is provided in meeting the needs of the milk producers and the industry as a whole. The Board, pay producers about £15 million per annum compared with £18 million paid for eggs, £22 million for pigs and £24 million for fat cattle.

It is evident that the milk industry is not only a major element in the agricultural industry but also in the economy of the country as a whole.

The question may be asked is a statutory marketing board necessary? Part of the answer is contained in the large number of small producers in Northern Ireland. If *laissez faire* prevailed the sale of milk by 22,000 individual units would create chaotic conditions. Prices would be forced down to uneconomic levels. Those producers who were situated in proximity to the liquid market might be able to obtain a better price but they would be under constant pressure from producers less favourably situated. Prices would be forced down and the supply of milk would fall. The size of the manufacturing industry would tend to contract. The quality of milk would also tend to deteriorate as the return on milk would

be insufficient to make possible the expenditure involved in the proper management of a dairy herd. In time and after the elimination of many producers, the industry would be reduced probably to the size of the liquid market plus a small margin which might be taken up in the manufacture of butter.

But the existence of the Board is not only vital in the interests of producers. Consumers and the general public also benefit directly and indirectly. Consumers of milk benefit from the assurance of a regular supply of milk of high quality at reasonable prices. The general public benefit from the employment provided by the industry both directly and indirectly and the level of employment depends on the size of the industry which in turn is dependent on the continuance of organised marketing of the raw material so as to ensure an adequate return to the producer.