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**Future global, EU and UK markets
for milk and milk products –
*implications for the UK dairy industry***

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9 Responding to future market requirements determined by changing output and demand patterns: effects on the structure and management of the dairy herd

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INTRODUCTION

Most milk producers' view of 'the market' is the company or its buyer purchasing their milk. The producer wants to be assured that the buyer is part of a sound business, that will pay regularly, and that is developing new products and investing in new plant or processing equipment to maintain a competitive edge. The producer needs to be paid a price for milk which allows a reasonable return – sufficient to run the business and allow investment in new technologies to increase efficiencies that enable the business to thrive within the confines of the European Union (EU) milk quota system.

The producer's choice of buyer is not however simply driven by price. During the last few years, milk producers in the United Kingdom (UK) have seen radical changes brought about by deregulation, under which the five marketing boards covering England, Wales and Scotland were abolished in 1995 and replaced by some 90-100 private sector companies and groups. Many producers wish to sell their milk through a cooperative or selling group - these do not necessarily offer the highest price per litre, but producers consider that there are some advantages to be gained by involvement and participation and some producers' commitment to a particular buyer has been influenced by the latter's outlay on advertising. Of increasing importance are such practical day-to-day factors as the quality assurance system the producer will be expected to operate on behalf of the buyer, the arrangements for milk collection, and for those producers supplying speciality milks, such as organic, Channel Island and milk from other minor breeds, the limited but lucrative markets that can be exploited.

Market demands will continue to change with time, but clean, hygienic milk with no antibiotic contamination will be a constant requirement, and the need for production at least cost with minimum and maximum quality levels for butterfat and protein depending on the buyer's requirements will also be a constant factor. Furthermore, the customer, both buyer and final consumer, needs to be assured

that high standards of husbandry and welfare operate in the herds from which the milk is produced, and in addition, recognition will need to be given to the groundswell of public opinion and pressures for the operation of environmentally friendly systems.

STRUCTURE

With the current economic pressures being experienced by UK dairy farmers, herd size is likely to continue to increase. Milk yields too will increase as producers attempt to drive down the costs of production. This will result in fewer cows within the 'UK herd', larger industrial herds, higher milk yields/cow and of course fewer producers (see Tables 1 and 2).

Table 1
The UK herd and numbers of milk producers

Year	UK dairy cow Numbers (1000s)	Milk producers
1950		196 001
1960		151 625
1970	3244	100 741
1980	3224	56 247
1990	2846	41 248
1994	2713	36 709
1995	2600	36 583
1996	2584	35 480
1997	2473	34 242
2000	2100	30 000

Source: *Dairy Facts and Figures* (1996 & 1997)

Table 2
Herd size and average milk production

Year	Average herd size	Milk yield/cow/annum	
		<i>All</i>	<i>Recorded</i>
1990	67	5145	5887
1995	71	5380	6269
1996	72	5515	6548

Source: *Dairy Facts and Figures* (1997)

The pressure for these changes in yield and herd size are driven by several factors including –

- the current low average milk price, which has fallen by some 20% during the past year (and is likely to decline further in the short-term);
- the increasing administrative burden as government legislation and formal quality assurance systems come on line;
- the age structure of the industry workforce.

The increase in herd size in the drive to improve efficiency will not necessarily result in more cows per stockman because short- and medium-term goals involve improved welfare and husbandry standards for all dairy farmers.

Milk processors need to keep their plant in full operation all the time and there are likely to be premiums for an even supply of milk throughout the year - more producers will therefore change to an all-the-year-round calving pattern. This demands greater management skills than those required for herds with a short seasonal calving period.

The Holstein X Friesian will continue to be the major breed but there will inevitably be a niche market for milk from other breeds to cater for an increasingly sophisticated and discerning consumer demand. Capital investments in buildings and machinery will be limited to absolute necessities in the short-term - basically those required to comply with legislation while the milk price remains at its current level. Therefore good quality maintenance will be a feature of most units.

MANAGEMENT

There are several different types of milk production system and it is clear from a significant body of research work that no one system is superior. Generally, it is the high standard of management that produces good results. There is an unsatisfied demand for organic milk and the industry can expect an increasing number of farms, particularly family farms, to convert to this type of production to qualify for enhanced premiums. However, whatever milk production system is operated, all areas of the business need to be constantly reviewed and questioned. It is important that producers maximise production from their own resources and how this is carried out will depend on the geographical location, soil type, rainfall and the infrastructure of a particular farm.

There are usually some advantages from farming in a particular location. The western side of the country can generally grow more grass than the southern and eastern parts, while the latter areas may have more by-products available through reduced feed costs. Generally the farms in these areas are located

nearer to the larger conurbations and so often have a broader choice of market outlet.

Table 3, showing information produced by the Kingshay Farming Trust in 1996, provides an excellent indication of the costs of milk production. The survey involved data from the herds of 400 members and the results for categories of expenditure on a cost/litre basis, together with their ranges, are shown. The data show the average cost of production from 312 Holstein X Friesian herds. The average herd contained 128 cows yielding 6119 litres/cow per annum using 0.27 kg concentrate/litre. An average of 242 kg nitrogen fertiliser was used per hectare and production from forage was 2814 litres – well above the national average – at a stocking rate of 2.26 cows/ha. The costs do not include any charge for quota leasing: 30% of the herd's leased quota, the range of costs being zero where no quota was leased to 6.3p/litre. While these costs were produced some 16 months ago, updated calculations by the Kingshay Farming Trust provide a very similar final figure.

Table 3
Costs Per Litre of Milk Produced, Kingshay Farming Trust Survey 1996

	Pence/litre	Range
Purchased Feed	4.2	2.5 – 5.8
Fertiliser	0.8	
Vet & Medicine	1.1	
Other Variable Costs	1.1	
Other Forage Costs	1.1	1.3 – 2.9
Labour	5.0	2.7 – 8.2
Power & Machinery	2.7	1.9 – 3.6
Buildings & Maintenance	1.5	
Rent	1.7	

Total: 19.2

Note: does not include quota leasing/depreciation 1 – 6.3p/litre

Such data act as extremely useful benchmarks for producers to gauge their own costs and to decide where resources can be applied most effectively (and profitably) to reduce costs. However, it must be emphasised that the survey was undertaken in a large group of producers where performance is well above the national average. With Milk Marque forecasting a further decline in milk price during the coming months, the prediction being made by one national

consultancy, namely for a further loss of 500 producers by the millennium, looks well founded. It is beyond the scope of this paper to detail all the management areas which can be reviewed to improve efficiency. However, the current trend to improve grassland management with extended grazing is one area which many producers find appealing but it would not be suitable for all dairy farmers, particularly those on heavy soil types or with very large herds. The premise that it is the manager not the system which generates results holds true.

Producers should take some confidence from the fact that they are funding research and development work through the Milk Development Council in many of the areas of expenditure shown in Table 3.

HUSBANDRY AND WELFARE

Milk is a food and producers forget that at their peril. The industry is very much in the spotlight and high standards of welfare and husbandry are vital. Milk producers need to realise that the systems of production under which their cows are kept are of real interest to the public. Quality assurance schemes will develop further and it is hoped that a national scheme that is acceptable to all producers and buyers will be produced in the near future.

Higher standards of husbandry and welfare will be expected in the future. Therefore the average number of cows managed by a herdsman is unlikely to increase above 100 with most herds remaining around 80 cows/herdsman as milk yield increases too.

Major welfare and disease problems occur more frequently during the winter and it is important that cow comfort is ensured through good stockmanship and housing. It will be impossible to manage the larger herd in the future without routine and regular visits from the veterinary practitioner who should support the producer in ensuring healthy cows with good levels of fertility. Producers need to value their staff more. The herdsman's role, and particularly the herd manager's responsibilities, are demanding and it is very important that they are properly remunerated and trained and have the chance to keep up to date through regular training. I hope the industry makes good use of the recently-launched Royal Association of British Dairy Farmers (RABDF) and Milk Development Corporation (MDC) Herdsman's Training Courses. Increased effort to look after the national herd should result in greater longevity and a decrease in the average heifer replacement rate.

In summary, dairy herds will become larger and milk yield/cow will increase. In the short- to medium-term, there will be a sharp decline in the numbers of dairy farmers exacerbated by the current economic pressures. Milk producers have a strong armoury of weapons to produce milk for a wide range of market requirements. Greater emphasis and more resources are required to ensure that

the welfare, husbandry and production standards in UK herds are second to none.

A key aspiration is that producers, buyers and their customers can communicate, develop understanding and work effectively together to satisfy customer requirements and thus maintain a vital, productive and successful industry.

REFERENCE

1996 *Dairy Facts and Figures*

1997 *Dairy Facts and Figures*