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CAS Paper 37

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

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2 The dairy industry of the future: consumer attitudes, preferences and expectations

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INTRODUCTION

Without consumers there is no dairy industry - only continued purchasing of milk and dairy products will ensure a vibrant and viable industry into the next millennium. It is reasonable to suggest that consumer attitudes to food in general, and dairy products in particular, will determine the industry's future. Moreover, consumer attitudes change in a slow and steady manner and are not seriously affected by short-term influences. As a result, current consumer attitudes, preferences and expectations provide a platform from which to judge the direction of future change.

THE MODERN CONSUMER

The modern consumer is increasingly aware of food issues, through articles in the press, in popular magazines, on radio and on television. However, articles and programmes about food or food-related matters are popular and highly rated. On the one hand, this results in a well-informed public, but on the other, there is the danger of unjustified public concern associated with unbalanced comment. In the same vein, the consumer is well-briefed on matters of diet and health. In particular it would be difficult for anyone not to be aware that as a nation we are overfed and take too little exercise though over the past few decades the general standard of living of the population has progressively improved. The legacy of the Second World War was a scarcity in the supply of basic foods and a dominant concern for a return to self-sufficiency. Nowadays, however, the nation is, if anything, over-nourished and consumer choice has become more complex. For example the consumer expects a diverse range of food to be available throughout the year; and expects also a consistently high quality *and* increased value for money.

CONSEQUENCES FOR INDUSTRY

Consumers furthermore expect food to be wholesome and safe. Compliance with this over-riding imperative hinges on an effective audit trail from pasture to product and much of the infrastructure required to satisfy this demand is already in place. Dairy herds are usually well documented with

comprehensive health records, and from raw milk leaving the farm gate until the finished product is dispatched from the creamery or dairy, its history is fully recorded. Nevertheless, there are two weak links in the chain.

First, the full extent of environmental pollution is not fully understood, and much work is therefore needed on the development of control measures. The nuclear accident in the Soviet Union in 1988 demonstrated the fragility of the ecosphere, and other incidents have stressed that distant events can have far reaching consequences on food production.

Second, it is largely a matter of chance how well a food product is handled once it leaves the retail outlet. Perishable commodities are frequently subject to extreme temperature abuse on the journey between the shop and home, and storage in the home is often less than perfect.

ENVIRONMENT - A WEAK LINK

Consumers are justifiably worried about environmental contamination by pesticides and other pernicious residues, by antibiotics in the feed chain and by the use of 'unnatural' methods to produce milk. They are also unhappy about wider farming issues such as the eutrophication of our rivers and lakes by imprudent use of fertilisers. More recently, disease problems that may be attributable to animal feed have become a matter of concern.

One potential solution to many of these problems is to adopt the 'organic' codes of practice. These encompass a holistic approach to the environment, and over a period seek to eliminate chemical residues and to establish food production in sympathy with the ecosphere. This approach is sensible and logical in the long term. However, there are clearly short-term problems. In many cases, organic food falls short of the quality expected by the consumer. Substantial effort will be required to match organic products to those that currently include sophisticated processing aids and functional additives.

Furthermore, traditional farming practice merits constant review. For example, the emergence of highly infective, pathogenic strains of *Escherichia coli* question the widespread practice of spreading slurry on the open field. The aerosol so created presents a potential health hazard and contamination of the pasture ensures that the infectious organism remains in the environment. There are no easy solutions to problems of this sort.

TILL TO TABLE - ANOTHER WEAK LINK

During transport from retail store to home, sensitive products like pasteurised milk and cream are often subject to unacceptably high temperatures. Once in the home they may be stored in domestic refrigerators with poor temperature control and in the presence of hazards such as uncooked meat. In this

context the industry should consider being proactive. Promotion of cool bags in the retail outlets and educational leaflets about hazards in the refrigerator are worthy of consideration. An integrated approach to these issues by all sectors of the food chain will ensure that only wholesome food is consumed.

NUTRITION

Milk protein is highly nutritious and second only to that of egg protein in terms of quality. Furthermore, milk is a rich source of readily available calcium. Together these attributes make milk an ideal food for the young, the pregnant and the elderly consumer. Despite attacks from competing industries, the status of milk fat gives no cause for concern. Contrary to popular belief, milk fat is not fully saturated – it is rich in short-chain fatty acids and in monounsaturated fatty acid. Nevertheless, milk fat has a high calorific value. As a result, there is growing pressure to produce low-fat products which mimic traditional analogues. This objective eludes the industry because skim milk, low-fat yoghurt and low-fat cheese do not yet match the traditional full-fat product in sensory quality. Further intensive research will be required to solve this difficult problem.

The inherent nutritional value of milk protein and calcium merits greater exploitation. It is worthy of note that some minority breeds of cattle naturally produce milk with an enhanced protein (and calcium) content.

INCREASING CONSUMER CHOICE

The industry is well aware of the need to present the consumer with a range of new, interesting and high quality dairy products. Successful strategies include:

- revival and promotion of milk from minority breeds;
- adaptation of foreign foods to the domestic palate;
- identification of gaps in current product ranges;
- capitalising on advances in science.

The successful marketing of milk from minority breeds is a good example of the ingenuity of the industry. There is a well-established market for milk and dairy products from the Channel Island breeds, and recently a market has been developed for milk from the Ayrshire cow. Although some are sceptical about the differences between such milks and that of the more usual black and white cow, there is soundly-based evidence that the differences are real.

The development of cream liqueurs is a good example of science-led diversification of the market. The initial product was Atholl Brose, but problems associated with lipase caused this product to fail. In contrast Baileys Irish Cream, though bedevilled initially by shelf-life problems, was a great success. The next generation of liqueurs were citrate-stabilised products and have an extended shelf-life. In response to the imposition of non-tariff trade

barriers, high proof liqueurs and products based on wine were then devised. Further sophistication was introduced to the product range in the form of liqueurs which float on coffee. Recent developments have slowed but 'low-calorie' liqueurs are being marketed and the manufacture of low pH liqueurs now seems feasible.

CHALLENGES AHEAD

The dairy industry is already tuned to recognise and respond to consumer pressures, but looking to the future, there are many challenges that will need to be addressed including –

- the implementation of modern information technology to monitor the quality audit trail;
- the adoption of a holistic approach to quality;
- becoming proactive in terms of consumer education;
- increasing investment in new product development.

The dairy industry is well served with the technical, economic and scientific expertise needed to develop and make progress in all these areas of challenge but one significant concern must be the growing shortage of dairy specialists. It would therefore be prudent for the industry to review its specific needs for education and training in order to ensure that a shortfall of these key resources does not prejudice its future efficiency and competitiveness in both home and overseas markets.