

Meat Market Review

Is the Meat Industry doing enough to rebuild consumer confidence?

January 2003



Food Safety – a testing time for consumer confidence

British consumers are spending an ever declining proportion of their disposable income on food, currently around 11-12% at retail level*, but they are demanding ever higher standards in terms of quality, taste, safety, value for money and convenience, while secondary issues extend to animal welfare, the environment and other 'green' issues.

Confidence in the food chain has been severely shaken in the past two decades with warnings of salmonella in eggs, BSE or 'mad cow disease' and its human equivalent CJD, hormone growth promoters and excessive use of antibiotics related to intensive production methods.

At the same time, the retail sector has consolidated its power with the majors such as Tesco, Sainsbury's, Safeway, Asda and Marks & Spencer, taking an increasing share, around 70% of the £53 billion retail spend on food.

* British Retail Consortium 2001

As well as demanding higher standards, supermarkets have also demanded increasing innovation and a higher degree of processing.

In addition there are moves within the EU to extend agreements on meat hygiene rules.

Pressure for change

This has resulted in pressure on both primary producers and processors has grown as the demands of the retail sector have developed. This has been matched by increasing rationalisation in the catering sector, which accounts for around 30% of every food pound spent.



Consumers and their representative organisations have also flexed their muscles in demanding greater reassurance and keener prices.

The end result has been escalating tensions at various stages in the food chain and a heightened degree of regulation at both EU and national levels. This ranges from improved UK standards on animal welfare through stricter controls or bans on the use of certain chemicals and veterinary medicines to the imposition of tighter trade conditions.

The BSE crisis

A large part of this was due to the BSE crisis of the 1990s, which led to the Phillips Report, calling for greater transparency in the meat and livestock industry. But this was rapidly overtaken by the foot and mouth disease crisis of 2001 which, although it had no implications for consumer health, further undermined consumer confidence in this particular sector.

Steps for change . . .

To assess the need for change three independent investigations were commissioned by the government. The most significant of which, from both consumer and primary producer points of view, was the Policy Commission on the Future of Food and Farming, chaired by Sir Don Curry, which reported back early in 2002. Among its many recommendations was a call to address the problems of the red meat supply chain.

Moves in the right direction

At the launch of the subsequent Red Meat Forum, food minister Lord Whitty commented: "The market for meat in this country remains huge in spite of consumer fears and scares. What needs to be done is to regain consumer confidence in the safety, quality, authenticity and conditions of production of British meat."



Little Red Tractor

This message has already been taken on board by primary producers who had already launched a raft of self-regulating assurance bodies, culminating in the creation of the British Farm Standard – represented by the Little Red Tractor in mid-2000.

. . . and other measures

Arguably, the first of these bodies was the Scottish Pig Industry Initiative (SPII) established in 1990 to set down a series of production codes including feeding, welfare and veterinary systems. This was followed by the creation of such organisations as Farm Assured British Beef and Lamb (FABBL), Assured British Meat and Quality Meat Scotland. Similar schemes were created for poultry, eggs and farm fish production. In each case auditing was carried out by independent organisations authorised by the UK Accreditation Service.

David Clarke, chief executive of Assured Food Standards, comments that membership of one assurance scheme or another has penetrated the whole industry to a high degree, accounting for around 90% of British pig production and almost all the major poultry production groups. For beef and lamb, the official figure is less than half the units involved but he estimates that as it tends to be the larger units about 70% of production is covered.

In line with the Curry Report, efforts are being made to harmonise the assurance codes as far as possible and reduce the need for multiple farm inspection. The report underlined the role of voluntary assurance schemes and 'market pull' as the vehicles for achieving higher standards.

'The whole farm audit would be a channel for complying with existing and planned regulations: bringing them together in a single vehicle, making it easier to handle for the business on the ground – and reducing overlapping inspections,' said Sir Donald Curry. 'The way the Nitrates Directive has been handled should be a dire warning of the shape of things to come if we don't intercept the forthcoming raft of legislation and help set up a vehicle like whole farm audits through which we can manage it.'



Further up the meat chain, meat plants have also been subject to tighter controls, particularly in the wake of the BSE crisis, which focused closely on the disposal of the so-called 'fifth quarter' or offals. Instead of acting as an added profit generator these became an added cost.

Increased policing . . .

Policing is carried out by the Meat Hygiene Service (MHS), a unitary body set up by the government in 1996 to replace meat inspectors from around 300 local authorities.

Since June 2002, the MHS has also been responsible for observance in larger meat plants of mandatory Hazard Analysis Critical Control Point programmes. These become mandatory for small and medium sized units from next June.

Financial barriers

Operators of these plants say they are working on tiny margins, aggravated by pressure from supermarkets which are intent on the twin tasks of driving up quality while driving down prices. So far, with one or two notable exceptions, there has been great resistance to further rationalisation among the 320 meat plants left in Britain in spite of acknowledged over-capacity.

In addition to creating the MHS, the government introduced the Food Standards Agency in 2000 as a free-standing consumer watchdog reporting to Parliament via the Department of Health. Its guiding principles were to put consumers first, to be open and accessible and to be independent.

In effect, it was seen as a counterweight to the then Ministry of Agriculture, Fisheries and Food – which became the Department of Environment, Food and Rural Affairs in June 2001 – which many considered to be too close to the food and farming lobbies to make a major impact in restoring consumer confidence after BSE and other food scares. Among its tasks was reducing food and farming lobbies to make a major impact in restoring consumer confidence after BSE and other food scares. But also reducing food borne illnesses, encouraging more healthy eating, reinforcing food law and, crucially, earning consumers' trust.

The jury is probably still out on the overall success of government enforced measures to restore consumer confidence, but under the FSA director Professor Sir John Krebs, its initial impact has been generally positive. However, when surveyed consumers rate supermarket operators as the most trustworthy source of information on food issues, and increasingly look to them for reassurance.

Consumer confidence in question

The public jury is almost certainly still out on the various voluntary assurance schemes, consider for example, the re-launch of the 30-month old Little Red Tractor scheme in November 2002, which was aimed to increase consumer confidence and validate improved production practices. Dierdre Hutton, chairman of the National Consumer Council, comments that there are too many logos around leading to consumer confusion . . .



'The Little Red Tractor scheme has, so far, not delivered for consumers as much as it could, so we are very pleased it is to be revamped. But the proposed reforms need to be backed up with the necessary funding and resources to do the job properly. Unless consumers are fully involved in the development of a new scheme, beginning with widespread consultation on the proposals, they are unlikely to have much confidence in it,' she said.

Consumers lack confidence

Food poisoning and BSE remain the biggest fears among consumers, though the use of pesticides, additives, genetically modified (GM) ingredients, antibiotics in meat and livestock feed all show up in consumer surveys. Hormones in meat and dairy products have largely disappeared as an issue following an EU wide ban on their use and importation in 1998. Genetically modified products have also been the subject of an EU ban. However, these issues could reappear after the forthcoming World Trade Organisation talks on trade liberalisation. Pesticide use has been curbed voluntarily in the face of a threatened UK pesticide tax.

Antibiotic residues

Which leaves the use of antibiotics in veterinary medicine and the threat of increasing resistance to antibiotics in human medicine as one of the major remaining areas of consumer concern. Media regularly report the spectre of 'superbugs' developing and is perceived as a serious problem in humans. In the UK, the government has made it clear it takes the problem very seriously and has developed a comprehensive strategy to address it and maintain the effectiveness of antibiotic products.

Detection

The Veterinary Medicines Directorate (VMD), an executive agency of DEFRA, is responsible for the authorisation of veterinary medicines in the UK and the monitoring of veterinary medicine residues.

It operates two schemes; a statutory programme which implements EU legislation on residues in a range of animals and animal products, and a non-statutory one which covers imported and home-produced foods not covered by the National Surveillance Scheme.

The Medicines Act Veterinary Information Service (MAVIS) publishes monthly bulletins on residue levels found. This is supplemented by an annual report, now published by the Veterinary Medicines Committee. These reports have confirmed a high level of compliance with the safe use of medicines and endorsed the monitoring system. But with currently less than 0.1% (EU Directive 9623) of meat tested sample statistics are low and there have been occasional scares, especially with products such as imported honey, shellfish and, most recently, poultry meat from Brazil and Thailand.

Samples taken by authorised offices of the BMD are tested at the government Central Science Laboratory (CSL), York. This typically has a turnaround time for results of 28 days. This is not a problem in antibiotic resistance terms, although it could be in terms of toxicity if the product was consumed by someone with an allergic reaction. So the need for speedier testing techniques for consumer reassurance and avoidance of prosecution under the 'due diligence' clause of the Food Safety Act assumes a higher profile.

The future

One of the detection systems that has been the subject of a DEFRA-funded two-year trial as CSL is the Premi[®]Test from DSM, a Dutch specialty chemicals and biotechnology company. So far, according to Matthew Sherman, leader of the veterinary drug residue team there, it has proved effective in detecting a wide range of antibiotic residue, such as penicillins, sulphonamides and tetracyclines in a variety of products in both standard and CSL-improved technique form.

‘The message is that in its claimed form from DSM it would work well in a variety of places including meat plants and field laboratories. With our improved system – which involves a solvent extraction technique prior to testing – the test has a lower detection limit, which is more applicable for monitoring of samples in official testing laboratories whereby the detection of tetracyclines can be performed reliably at half the maximum residue level. It provides a screening test which rapidly eliminates the ‘negatives’ and allows us to focus on the confirmation of ‘suspect positive samples’ using additional techniques such as those based on mass spectrometry,’ he said.

By and large, as Tim Miles, veterinary manager with the Meat and Livestock commission, points out, Britain relies on EU accreditation to export plants outside the EU to police residues effectively. But he admits the system is not perfect.

‘Policing of imported products is a significant issue for the consumer, notably when positives are found in terms of non-compliance with withdrawal periods. There is room for improvement in policing at EU level. We are detecting levels of non-compliance in some imports and this is cause for concern,’ he says.

So what does the UK food and agricultural industry think about this? In the main, leading representatives remain confident that, at least for home produced and EU products, the policing systems work effectively. They say this is borne out by the tiny percentages of samples that exceed maximum residue levels recorded by the BMMD. But many also admit there could be a question mark over some non EU imports and, if this became a public issue, further private testing might become, if not mandatory, at least a very desirable activity to retain consumer assurance.

Poultry and eggs

‘A rapid test for antibiotic residue might be useful for importers who want to reassure themselves of the provenance of the product. We import nearly 400,000 tons of poultry meat a year, much of it from non EU countries where there may be doubts. For example, there are problems with some products from Thailand and Brazil’ said Peter Bradnock, Chief Executive of the British Poultry Council.



Both the poultry meat and egg production sectors in Britain are highly integrated with a small number of big players bringing together feed supply, production and processing facilities. This reduces the risk of non-compliance with regulations. In addition, the voluntary Lion mark code covers about 80% of British egg production and guarantees standards of safety in excess of UK or EU specification.

‘The industry does not routinely use antibiotics. The only time these are used in laying hens are the rare occasion in case of illness.’ says Mark Williams of the British Egg Industry Council. ‘However, that is not to say that a quick, low cost and effective test would not be welcome by some of our members. Anything that can be helpful in ensuring our products are as safe as possible is to be welcomed.’

The Grampian Country Food Group is one of Britain's biggest food producing companies, operating in Scotland, England and Wales and more recently in Thailand. It features a high degree of vertical integration from farm to factory as well as its own feed manufacturing facility. Its ranges of pig and poultry products are found in most supermarkets as well as many foodservice outlets.

Managing Director Alistair Cox is confident that current testing procedures are robust but adds: 'as with any new development, we have to examine what the benefit of a rapid screening test might be at the end of the day. If it was something that was not a requirement in meeting legislation but a simple add-on, which might prove costly, I do not think we would be that interested. Cost is a major factor. However, if it was something that was of benefit to the consumer and it was economically viable, accurate and reliable we could look at it.'

Fish farming

The fish farming industry has been the target of many attacks by environmental groups over the years, facing up to accusations of pollution and over-use of pharmaceuticals and other chemicals. It has successfully defended itself by helping finance the development of vaccines and improved husbandry. It is one of the fastest growing sectors of the food industry.

'The level of antibiotic use is now a fraction of 1% of what it was 10 years ago,' says Dr John Webster, technical specialist with Scottish Quality Salmon. 'The development of vaccines has been extraordinarily effective and the use of antibiotics has dwindled to almost nothing. Where antibiotics are used, the fish are given a very long withdrawal period, way beyond the periods required.'

Chris Leftwich, chief inspector at the Billingsgate fish market in London, is sceptical about the value of an antibiotic testing system for the seafood sector. But an increasing amount of fish handled at ports is farmed stock from overseas suppliers. He admits that merchants might call on a testing programme if a scare developed and was picked up by the media.

Meat industry

The meat wholesaling sector has been subject to substantial rationalisation in the past decade or so, largely as a result of EU legislation. But it still suffers from over-capacity leading to cut-throat competition and razor-thin margins. Because of this, as Peter Scott, general secretary of the British Meat Federation, makes clear, they are unwilling to consider any additional system which would add costs with little perceived addition in value.

Alistair Donaldson, director of the Scottish Association of Meat Wholesalers, commented: 'If a major retailer came up with a proposition they wanted more testing than their suppliers might have to look more closely at the issue. This could possibly arise if there was a crisis of confidence in the existing testing system or if there was a sudden flare-up of consumer concern about antibiotics, in which case an additional testing procedure could prove useful in rebuilding assurance.'

Retailers

Most of the major retailers have their own analytical laboratories, either in-house or on a contract basis, and a technical manager responsible for analytical services. Only accredited laboratories are used. This safeguard is seen as a primary defence against possible actions under the 'due diligence' clause of the Food Safety Act. Ken Swaffer of the British Retail Consortium remains confident that combination of statutory and commercial testing is effective.

Farmers

Farmers have been one of the most sensitive groups to any food scare because of the direct affect on their incomes. For this reason they were prime movers in the creation of the Responsible Use of Medicine in Animals Alliance (RUMA) set up seven years ago with representatives from all sectors of the food chain.

Its aim is to promote the highest standards of food safety, animal health and welfare. Among its members is the British Veterinary Association which was one of the first bodies to take action in tackling the antibiotic residue issue through the publication of its Code of Practice on Medicines and implementation of a self audit system. Another member, the National Office of Animal Health (NOAH), representing animal health product manufacturers, publishes the Compendium of Data Sheets for Veterinary Products.

Conclusion

Food industry scares in the past two decades have created a crisis of confidence among consumers. Although much has been achieved in helping allay their fears through the creation of both statutory and voluntary controls. New concerns occur appear regularly, and consumers remain confused by often conflicting messages.

The concept of zero risk is, of course, untenable but improvements are always possible. Fears of antibiotic resistance and the creation of 'superbugs' is not currently in the forefront of consumers' minds but it is simmering away and could blow up at any time. Thus the development and availability of rapid test technology is a valuable industry tool. Similar tools are sought for the detection of other problems such as foot and mouth disease, tuberculosis and BSE.

DSM Premi[®]Test – a valuable new tool for the British Food Industry

Consumers in developed countries have become increasingly concerned about the safety of their food and are demanding greater safeguards. National governments in the EU and the European Commission have responded with increased regulation.

Under EC Directive 96/23 all member states must carry out targeted surveillance for veterinary medicine residues in a range of animals and animal products, including red meat, poultry, farmed fish, milk, eggs, honey and wild and farmed game.

The Directive was a response to growing fears of increased bacterial resistance to antibiotics, at least part of which was considered attributable to unwise use in veterinary medicines. Many also maintain incautious use of antibiotics in human medicine have played a part.

In Britain, the residues monitoring programme is carried out by the Veterinary Medicines Directorate with samples being analysed at the government's Central Science Laboratory, York. There is generally a 28-day turnaround time for results to be fed back to the VMD.

DSM, a Dutch-based specialty chemicals and biotechnology company, has developed a new rapid test – the Premi[®]Test – for the presence of antibiotic residues in meat in excess of the maximum residue levels which can be used on site and provide results within a few hours.

It also commissioned a leading meat and livestock industry journalist to conduct a survey of current knowledge and opinions on antibiotic testing at both industry and official levels.

His report, 'Food Safety – a testing time for consumer confidence' found there was still a high degree of consumer concern at the growth of antibiotic resistance with consumer groups calling for reduced use with the exception of therapeutic use on prescription.

Throughout the rest of the food chain there was a high degree of satisfaction with the work of the VMD and the CSL. All felt that the low numbers of samples failing to meet MRLs confirmed the monitoring systems was working properly and providing consumer assurance.

There was, however, some concern that increasing food imports into Britain could raise the level of potential risk. Imports are covered by VMD's non-statutory surveillance programme.

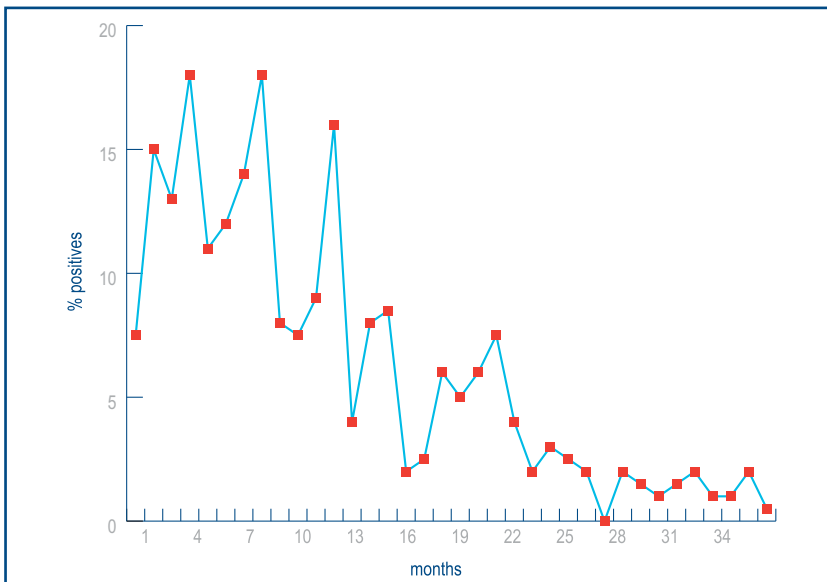
One tool for change in the antibiotic residue testing area is Premi[®]Test. Premi[®]Test has been on trial at the CSL for two years under a programme funded by the UK Department for Environment, Food and Rural Affairs and was found to work quickly and effectively as an antibiotic residue screening test.



Premi[®]Test can be done on site and the results are ready within four hours. This enables the industry to opt for faster testing which will guarantee higher quality standards of meat production by detecting problems quickly and before there is any risk of meat entering the food chain.

Quote from Françoise de Goeijen, Business Manager DSM Premi[®]Test

"It is encouraging to see that the meat industry is starting to help build consumer confidence. We are convinced that our new test, the only validated fast test for antibiotic residue in meat – the Premi[®]Test – will allow the meat industry to increase measures of self monitoring, thereby ensuring that low levels of antibiotic residues are maintained. Thus building confidence at all levels in the meat we eat everyday."



Investigations in Ireland have shown a 10-fold reduction in sulphamethazine positive animals, by monitoring residue levels and feeding the results back to the suppliers.

Ref: Dr. Michael O'Keefe, Dublin 1999.



This report was written and compiled by Vic Robertson, January 2003.