

Comparative Case Study 5

Verification for Food Safety: The Case of the Meat Industry

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Summary

This case study is concerned with standards in the European food industry. It reviews the experience of two European countries, the United Kingdom and the Netherlands, particularly in the area of meat hygiene. Human health and safety and animal welfare are among the drivers of food policy in these countries. The main institutions for food safety are reviewed, particularly as they apply to meat hygiene, emphasising principles which may have wider applicability. The recent shift in food policy from a prescriptive to a hazards based approach is described, as are some associated institutional changes such as the potential for delegation of control functions by the competent authorities. Among the features of interest is the potential for credits to be operators who are participating in a private sector assurance ('certification') scheme.

Lessons Learned

This case study illustrates several principles of interest to the forest sector, including:

1. The benefits which come from tailoring control system design to vulnerable institutions, focussing on the management of risk.
2. The need to adapt standards to local conditions, so that design is realistic and capable of effective implementation in the given social and economic context.
3. The relationships between design principles (for example, risk assessment) and audit requirements
4. The value of linking performance principles to the interests of the party in question, as in the present case where high traceability standards serve both public and commercial interests.
5. The incentive effects of linking new control requirements to established performance standards in a mutually reinforcing way - as where credits are given for participation in existing assurance schemes. When, as is the case with the Netherlands pig industry, a sole certified standard is accepted by all downstream operators, then the reinforcement tends to be particularly strong.
6. The key requirements for independence in monitoring and audit, 'independence' implying freedom from commercial and other pressures that might affect an agency's ability to undertake control tasks in an impartial and credible way.



A. The context: food safety standards in the EU

The EU is the world's largest importer and exporter of foods (EU 2000 WP). Annual production is worth almost €600 billion, equal to 15% of total manufacturing output. The agricultural sector has an annual production of about €220bn, with over 7.5 mn. *fte* jobs. The food and drinks component is the third largest industrial employer in the EU with over 2.6 million employees, 30% in small-medium enterprises. Exports of agricultural and food & drinks products are worth about €50 bn. per year (EU WP 2000).

The UK, one of the 25 member states, is about 63% self-sufficient in food (2003; DEFRA <http://statistics.defra.gov.uk/esg/quick/agri.asp>). Exports and imports from and to the UK have both increased dramatically in recent years – since 1960, for example, the increases by volume have been of the order of 600% and 700% respectively (Defra, ESD, 2003), with imports worth over twice the value of exports. Exports and imports of the three main categories of food, feed and drink stood, as of 2003, at (imports in brackets): unprocessed: £1bn. [£4 bn.]; lightly processed: £3.4 bn. [£9.5bn.]; and highly processed: \$5.5bn [£6.5bn.] (*Ibid.*) Proportionately, the UK's imports and exports from and to EU and non-EU states are both approximately equivalent, with a ratio of 2:1 in favour of the EU in each case. The main non-EU partner is the USA, although trade is significant with countries on all four continents. Livestock is an important component of the UK food industry and of the economy at large. Indeed, the four main classes of terrestrial livestock (cattle, sheep, pigs and poultry) outnumber humans three to one, in population terms. As of 2003, livestock and products produced in the UK were valued at £9.2 bn.

Being such an important constituent of a notably open economy, with direct health and welfare implications for the population at large, the food industry is a key area for public regulation. In the case of livestock, there are additional animal health and welfare concerns. In recent years, public interest in regulation of the food industry, particularly the livestock component, has been underlined by major food scares. Consumer confidence has been badly affected by a series of high-profile and emotive disease outbreaks, often with an important anthropogenic dimension, such as 'BSE' [Bovine Spongiform Encephalopathy or 'Mad Cow Disease'] in the 1980s; Salmonella in poultry in the 1980s and -90s; and Foot and Mouth Disease in 2001). In addition to the direct effects on human and animal health and welfare, such crises have also had a severe impact on trade. For example, in 2003, the UK's trade in beef, sheep meat and pork favoured imports over exports by a ratio of 5:1, due largely to the catastrophic decline in export markets for beef occasioned firstly by the BSE outbreak (the EU banned all exports of beef and products from the UK in 1996, a ban that was only lifted in 2006), later compounded by restrictions imposed after the outbreak of foot and mouth disease.

Food quality and health standards are issues which impinge directly on all consumers – which, in post-industrial societies, can be equated more or less with the population at large. The primary rationale for verifying that regulation is operating effectively is health and safety, for the lack of them often becomes immediately apparent in very tangible ways: illness and disease, perhaps of epidemic proportions. However, there are also other considerations – a case in point being foot and mouth disease, where the primary concerns are not necessarily human health related (but rather, loss of export markets, access to the countryside, etc.). Policy tends to be heavily influenced by the media, with the standard pattern being one of 'doomsday reporting' following a food-related disease outbreak, tending to encourage precipitate action, later followed (when the media outcry has calmed down) by a process of progressive 'managing down', involving more careful risk assessment and management, and healthier processes of policy development.

The present case study will focus mainly on one aspect of food standards: meat and animal products, with a primary interest in regulation for UK markets. However, Box Two considers some of the distinctive features of another European system: that of the Netherlands.

The next section focuses on the institutional structure of UK regulation, and this is followed by an examination of trends in regulation in the UK meat industry.

B. The Legal And Institutional Context Of UK Food Safety

Because of the single European market, the EC has an important role to play in setting food standards for the UK, as for the whole community. The EU White Paper on food safety which was published in 2000 had as its primary purposes to restore and maintain consumer confidence in the EU food industry (following successive food scares such as those referred to above, as well as contaminants such as dioxins), and at the same time to boost the competitiveness of the European food industry. The White Paper proposed the establishment of a European Food Safety Authority (EFSA) as the central risk assessment organ, to provide independent scientific advice and clear communication on existing and emerging risks. This is to be distinguished from the EU Food and Veterinary Office (FVO) which acts as a control body to ensure that EU legislation is effectively transposed into national law in the Member States and properly implemented and enforced.

In the UK, similar pressures for food safety led to the setting up of the UK Food Standards Agency (FSA) in 2000. The FSA is an independent Government department with a mandate to protect the public's health and consumer interests in relation to food.

Its aims include:

- Reducing food borne illness through improved food safety.
- Reducing the risks to consumers from chemical and radiological contamination.
- Helping people to eat more healthily, and making more informed choices to this end.
- Promoting informative labelling.
- Promoting best practice within the food industry.
- Improving the enforcement of food law.
- Increasing consumer confidence.

The FSA provides advice and information to the public and Government on food safety from farm to fork, nutrition and diet. It also protects consumers through food enforcement and monitoring. Its independence is formally assured through its status as a 'non-Ministerial government department', which responds to a Board whose mandate is to solely serve the public interest and not to represent sectoral interests. As a non-ministerial department, it depends on the Department of Health for its parliamentary work. However, the FSA has an independent legal basis and is thus able to offer public commentary and advice to the Department as well as to any other government body. It works at arm's length from government, and is free to publish its advice without restriction. The need for this degree of independence was underlined by the BSE affair, where the lack of independence of the existing regulatory authorities and the close alliance between them and the industry were heavily criticised.

The main primary legislation pertaining to food safety in the UK is the Food Safety Act of 1990. This establishes the legal basis for public food safety in the UK (for example, the conditions under which operators are liable), describes the offences relating to food production and sale, and specifies the roles of the various enforcement authorities. The FSA was established by a separate Act of Parliament in 2000. A significant proportion of the FSA's work relates to secondary legislation emanating originally from the EC. This covers, for example, 'horizontal' issues (matters which apply across the board to all foods) such as food additives, labelling, contaminants, materials in contact with food, specific nutritional foods, food treatment, food hygiene and food law enforcement (FSA 1.1 para 4). Liaison with the EC and MS is central to the FSA's work. It represents the UK Government on food safety and standards issues in the European Union, and is charged with consultation processes around proposed new EU legislation. In the UK, the FSA mandate overlaps with a large number of other government ministries and services, including the Departments (Ministries) of Health, Education & Skills, Environment Food and Rural Affairs, Trade and Industry, as well as services such as the Environmental Agency, Health and Safety Executive, and the Public Health Laboratories, as well as various departments of Local Government. The FSA has a single executive agency, the Meat Hygiene

Service (MHS), which has important control functions. There are a number of product-based inspection services, in addition to the MHS, such as the Dairy Hygiene Inspectorate and Egg Marketing Inspectorate (in England and Wales, both are part of DEFRA). Other services also have roles in animal disease control. These include the State Veterinary Service (SVS) which is an executive agency of Defra, and responsible for delivering government policy on animal health and welfare, through the prevention, detection and management of animal diseases in livestock.

C. Regulation In The Meat Industry

The meat industry is one of the most highly regulated industries in the world. Human food safety issues include:

1. Animal feeds and additives given to animals on the farm (particularly recycling products of animal origin in animal feeds; use of additives such as hormones; and use/contaminant effects of veterinary medicines);
2. Procedures for slaughter (relating to abattoir standards);
3. Cross-contamination of meat during slaughter and processing (location and techniques of evisceration, etc.), particularly where facilities are ‘co-located’ (for example, abattoir and minced meat product preparation);
4. Controls on disease-prone classes (for example, in the context of the BSE outbreak, ‘over-age’ animals);
5. Processing methods for fresh meat which are of concern to the buyer (for example, use of water retention agents in poultry meat; irradiation to lengthen product life; treatments of fresh meats with organic acids to lower bacterial counts);
6. Preparation of meat products with a degree of hazard (for example: sausages; gelatine; use of colouring agents)
7. Dangers of zoonosis (inter-species transfer of disease between animals and humans – including such high profile cases as: Salmonella [from poultry]; variant Creutzfeldt Jakobs disease [vCJD] which is the human variant of bovine spongiform encephalopathy [BSE] in cattle; and, more recently, bird ‘flu’ transmitted from poultry to humans, mostly in Asia).
8. Animal welfare concerns, such as:
 - Welfare on the farm
 - Animals in transport
 - Methods of slaughter.

In the UK, the main agency is the MHS. It is ‘responsible for the protection of public health and animal health and welfare in Great Britain, through proportionate enforcement of legislation in approved fresh meat premises (and) provides verification, audit, and meat inspection services in approved slaughterhouses, cutting plants, farmed and wild game facilities, and co-located minced meat and meat products premises. The MHS has a statutory duty to provide these services on demand, 24 hours a day, 365 days a year, throughout England, Scotland and Wales’ (FSA website).

The MHS handles a very substantial budget, the size of which is a matter of considerable political concern. For example, until recently it managed the ‘OTM scheme’, under which cattle over 30 months’ old were taken out of the human food chain. Between March 1996 and January 2006 (when the scheme was closed down), this cost the UK taxpayer £3.6 bn. This was despite the fact that the risk to humans, though finite, was extremely small (only about 150 people [0.000003% of the population] died as a result of vCJD in the period).

The excessive size of the potential outlay in such situations, hugely disproportionate to the risk, is one of the factors which have led to a change in the basis of food policy in the UK, in line with a Europe-

wide trend. Hitherto, meat regulation followed a *prescriptive policy* whereby meat safety was sought through the application of prescriptive directives to ensure the adequate certification of meat. There were 17 of these, covering such matters as the construction and equipping of abattoirs, temperature controls for chilling foods, etc. This policy had a number of weaknesses:

- a. Over-rigidity, and slow to respond to changing risk;
- b. Slow to accommodate new technology;
- c. Not well-adapted to traditional products and methods (for example, artisanal smoking of meats, etc.), even though these may be factually low-risk;
- d. Difficult to harmonise different systems.
- e. Potentially costly to implement and sustain.

The EU context reinforced some of these concerns. For example, the accession of the new member states was problematic in relation to point (c), and the problem of harmonisation (point [d]) particularly acute for a community of 25 disparate states (and growing).

Since 2004-5, the MHS has moved towards a more *hazards-based policy*. This implies a more proportionate, risks-based and less prescriptive approach. The focus becomes the identification of the current hazards, and then, establishing effective controls to minimise them. Thus, recent catastrophes in the UK have pointed to the location of important hazards on the farm, rather than in the slaughterhouse – the BSE epidemic, for example, derived principally from changes in standards for the production of animal-waste based animal feeds. Hazards relating to the abattoir were secondary and contingent. Similarly, many of the microbial pathogens that are of current concern in the food industry (*Salmonella*, *Campobacter*, *Escherichia coli*) are likely to be acquired by the animals on-farm, and then conveyed to the slaughtering facilities. Similarly, a significant source of risk in relation to food acquiring bacteria is in the kitchen, where the remedies are more likely to lie in education than infrastructure. Under a hazards-based system, the controls are adapted to the character of the risk, and not merely applied on a standardised ‘off-the-shelf’ basis. Much greater flexibility is required. In the UK, guidelines on food safety hazard management requires adherence to ‘HACCP principles’ (see Box One).

Inter alia, this evolution responds a directive at EU level for inspection services to accommodate traditional industries and methods, especially those with geographical difficulties. A typical case would be small abattoir or meat processing plant (for instance, for traditional cures of meats) in a physically isolated area, where the costs of installing new technologies or bringing in high-level veterinary supervision would be prohibitive. There are professional as well as political grounds for some accommodation here, as such industries tend to be low-risk, as they operate on a small scale, with limited mixing of products, and with short commodity chains.

An interesting, if more unusual, case relates to production techniques which, while non-traditional in an EU-context, may be much favoured by particular consumer groups. A case in point would be ‘smokies’ (sheep and goat with the skin still in place, though with the fur singed off), which are particularly popular with Afro-Caribbean immigrants. The problem with such products is that, while they are much in demand, their production techniques are unlikely to conform to established standards on any present-day scenario. The dilemma is thus one of high demand but no legitimate production methods to satisfy it. The FSA has responded to this by commissioning research from Bristol University to explore possibilities for more hygienic production methods. Should it be possible to implement these without increased risk to human health, it would then seek for an exception from the relevant EU provisions.

The move to a hazards-based system has implications for the exercise of controls. For example, the planning function shifts away from a regular rhythm of routine inspections towards more targeted investigations of high risk activities, weak points in the system and poor performers in both the commercial sector and the management agencies.

Box 1: HACCP Principles

The Hazard Analysis and Critical Control Point (HACCP) system is a scientific system to identify hazards and measures for their control in the food industry. It is promoted under the FAO/WHO 'Codex Alimentarius Commission', and is the preferred system for food safety within quality management systems (such as ISO 9000).

HACCP provides a means to assess hazards and establish control systems at all levels in the food production system, with a focus on prevention rather ex-post testing and cure. It offers a number of other benefits in addition to its primary aim of enhancing food safety - for example, helping inspection by regulatory authorities and increasing external confidence in food safety to the benefit of international trade.

The approach is multidisciplinary, involving (as appropriate) a combination of some or all of: agronomy, veterinary health, production, microbiology, medicine, public health, food technology, environmental health, chemistry and engineering.

The HACCP system consists of the following seven principles:

- **PRINCIPLE 1:** Conduct a hazard analysis.
- **PRINCIPLE 2:** Determine the Critical Control Points (CCPs).
- **PRINCIPLE 3:** Establish critical limit(s).
- **PRINCIPLE 4:** Establish a system to monitor control of the CCP.
- **PRINCIPLE 5:** Establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control.
- **PRINCIPLE 6:** Establish procedures for verification to confirm that the HACCP system is working effectively.
- **PRINCIPLE 7:** Establish documentation concerning all procedures and records appropriate to these principles and their application.

Source: FAO [http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/005/Y1579E/y1579e03.htm]

D. Control Systems

The EU White Paper on Food Safety of January 2000 includes a proposal on General Food Law which embodies a number of principles of food safety:

- i. The responsibilities of feed manufacturers, farmers and food operators for ensuring food safety;
- ii. The traceability of feed, and food and its ingredients;
- iii. Proper risk analysis, through risk assessment, management and control;
- iv. The application of the precautionary principle, where appropriate (i.e. avoiding actions whose consequences are unknown, but potentially negative to a serious extent and/or irreversible).

'Risk assessment' implies scientific advice and information analysis, while 'risk management' refers to regulation and control. Risk communication is in line with the EU requirements for transparency and accountability. The risk assessment function is of heightened importance in the food sector, because of the length and complexity of the commodity chain, and the role played by scientific research in understanding food safety issues. In consequence, a large number of agencies are involved in this stage of the management process, in the European case at both EU and member state levels. The key European institution is the EFSA.

Formal responsibility for control now lies with the EU, through the FVO. The FVO's control function is exercised mainly by carrying out inspections in Member States and in third countries exporting to the EU. Each year the FVO develops an inspection programme, identifying priority areas and countries for inspection. In order to ensure that the programme remains up to date and relevant, it is reviewed mid-year.

Responsibilities for day to day controls remains a national competence, however, and thus lies with the Member States. In the UK, the FSA has an important enforcement as well as information role. However, this is primarily at a directive level; on-the-ground food law implementation is in the hands of 499 local authorities (district and borough councils), except in relation to slaughterhouses, cutting plants and game processing establishments, where it is the responsibility of the MHS. The FSA is responsible for issuing 'food alerts' graded by severity (grade 'A' being for action, and grade 'B' for information), but responsibility for policing the system rests primarily with local authority departments, through Trading Standards and Environmental Health Officers. Except in unitary authorities (where the two roles are combined), the former are responsible for enforcement of food composition and product labelling and the latter for food hygiene regulations. (In European countries, the structure of food law implementation is highly variable, and this model is not necessarily followed elsewhere. For example, enforcement is highly centralised in France under the national veterinary service, but even more localised in Portugal, under small municipalities with an average population of about 30,000 (Foodaware, http://www.foodaware.org.uk/food/13_02rev.htm).

Verification In The Meat Industry

Traceability is a key element in food control systems and a requirement under EU law (the General Food Law regulation 178 of 2002, which came into force in all EU food and feed businesses in 2005). It implies the ability to follow a food item through all stages of production, processing and distribution in line with the EU's 'farm to fork' approach. However, EU guidelines stop short of full internal traceability (i.e. linking individual products to the source of materials used to produce them). The system in essence follows the 'one up one down' approach (i.e. operators are required to be able to trace the goods they are dealing with both one step above them and one step after them in the food chain).

Operator willingness to apply such traceability standards is much aided by the structure of the UK food industry, particularly the retail sector which is heavily concentrated in the hands of a few supermarket chains. For such companies and their suppliers, traceability has important commercial benefits relating to product management systems, quite independent of any food safety concerns, and is a key dimension of their superior profitability. This is an instance where the commercial interest supports the government's health agenda, and offers 'win-win' outcomes to both parties.

Within the EU, there is a move to recognise all Member States' systems as equivalents (with some exceptions being made for the systems in development of the new accession states). The new rules, being less prescriptive, allow Member States increased scope to achieve the common objective of safe food by differing means. Third countries (outside the EC) are required to show equivalence to EU standards. When compared to some other product chains, the balance of power in the food industry is markedly in favour of consumer countries, rather than producer countries, as standards have strong legal authority and many of the products could anyway be sourced elsewhere. Thus, third country firms that wish to produce for public markets have little choice but to conform to the standards imposed by the regulatory agencies. This partly accounts for the 'parallel production systems' observed with many southern producers – a marked contrast between the high-level facilities supporting the long-distance export trade to northern markets and the much lower standards which tend to be required of the local market.

The ultimate sanction available to the FSA/MHS is to refuse to allow the sale of meat of particular provenance, most likely by the 'de-listing' of a particular production plant. Appeals against such rulings can be dealt with in one of two ways, depending on the origin of the consignments in question:

1. For meat coming from outside the EU, the first line of appeal is likely to be through diplomatic channels.
2. For meat originating in the UK, appeals are presently heard by an Appeals Tribunal comprising a lawyer as chair, with a veterinary surgeon and an industry representative as members. This system has not worked well, however (there have been complaints of such tribunals straying beyond their immediate mandate), and it is about to be replaced (in 2006) by the magistrates' courts (the lowest level of the formal judicial system).

Box Two presents the specific case of the pig industry in the Netherlands, for purposes of comparison.

Audit and monitoring arrangements

'Verification' within the EU food safety system means 'checking, by examination and the provision of objective evidence, whether specified requirements have been fulfilled' (Article 2 of 854/2004). To date, verification for purposes of food safety controls has been in almost exclusively the hands of the competent authorities of the Member States – in the UK implying EU and national civil servants and local authorities. The EU role is now exercised by the FVS, through its monitoring and inspection programme. Verification is applied to two broad areas of activity: assessing compliance of private operators within the food production systems with the regulations, and assessing the effectiveness of national control and enforcement arrangements at various levels (relating to the performance of the national 'competent authorities').

An interesting aspect of the new law with regard to the former is the latitude which it allows authorities to take account of operators who are participating in an assurance scheme. Schemes which certify that the standards of husbandry and welfare on a member's farm or the standards of management within a processing facility meet nationally agreed levels of best practice are eligible for certain exemptions with regard to audit and monitoring. Typically, schemes would be accredited by the United Kingdom Accreditation Service, to EN45011 standard or similar. Such exemptions illustrate the benefits of a risk-based strategy, and the incentives which this provides to operators to work proactively to ensure high levels of product safety.

There is also a requirement for audit of competent national and local authorities, as specified in Art. 4(6) of R882/2004. This states:

'Competent authorities shall carry out internal audits or may have external audits carried out, and shall take appropriate measures in the light of their results, to ensure that they are achieving the objectives of this Regulation. These audits shall be subject to independent scrutiny and shall be carried out in a transparent manner.'

Recent EU legislation pertaining to competent authorities (specifically Regulation (EC) No. 882/2004 'on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules', and Regulation (EC) No.854/2004 'laying down specific rules for the organisation of official controls on products of animal origin intended for human consumption' open up inspection and audit activities to new institutional actors, in both areas (production and supervision). These would perform specific control tasks delegated to them by the competent authority, under specific conditions of delegation. Certain activities (for example, enforcement measures relating to cases of non-compliance) would be ineligible (Article 54 of Regulation 882/2004). The new operators would have to conform to standard EN45004 (ISO17020:1998) and/or another standard if more relevant to the delegated tasks in question. In the UK, such accreditation is granted by the United Kingdom Accreditation Service (UKAS). All instances of delegation must be notified to the Commission by the national authority, and there should be provision to withdraw the mandate in the event of poor performance.

Box 2: Meat controls in the Netherlands – the case of the pig industry

Pieter van Midwoud

This box reviews the roles of both the government and the market in guaranteeing food safety in the Netherlands. Particular features of the Netherlands case are the large number of private sector labels in the food industry (which respond to market demand in areas such as organic production), and the unique position of one label, IKB, in the pig industry.

The Netherlands has a long agricultural history in dairy and dairy products, pigs and poultry. In 2003, Dutch consumers spent €5.1 billion on meat and meat products, 16% of their total expenditure on food. In the same year the Netherlands had 11,2 million pigs, 0,7 million calves and 42 million poultry (CBS, 2004). The recent rise in the number of bureaucratic rules that operators have to contend with (driven by both environmental concerns and food crises) has had major impacts on the sector. As in the UK, recent animal disease outbreaks have undermined consumers' trust in the sector, and led to the introduction of numerous additional meat control measures (Bondt et al., 2003). Along with competition pressures resulting from liberalisation and internationalisation of the market, all this has resulted in a downsizing of the meat industry, particularly as regards pigs and poultry.

Rules

As member of the European Union, most of the primary legislation in the Netherlands is generated in Brussels. For the pig industry, the Dutch government has added various additional measures. This is resented by Dutch farmers who feel that they have to put up with too many rules, which weaken their competitive power. However, all operators in the meat chain agree that strong measures have to be taken to guarantee food safety or at least to prepare for effective action in the event of any new crises. A problem is that the importance and acceptability of the rules tend to be at odds (Bondt et al., 2003).

An important new tool for traceability in the Netherlands is the fact that each manufacturer has to be able to recall its suppliers and clients (the 'one up one down' principle). This does not necessarily extend to traceability to the individual animal. However, the current requirements ensure that all pigs that were slaughtered on the same day in a certain abattoir can be identified, and action taken when the need arises.

Control

Two bodies handle government controls on legal compliance, with some degree of overlap. The General Inspection Service (AID) has five regional offices and mainly controls farms and abattoirs. With abattoirs, the controls are applied before and after the animals are slaughtered and include checks on hormones, diseases, and meat quality, as well as some administrative aspects. The Food and Commodities Authority (VWA) handles the controls on meat as a commodity. It covers butchers, restaurants, supermarkets etc.

Private labels

There are 15 private-sector, market-driven labels for meat production in the Netherlands. The most important of these in terms of size and impact, is the 'Integral Chain Management Certificate' (IKB) for pigs. This will be used to illustrate the Netherlands labelling system. The IKB imposes extra controls on pigs, in addition to the government controls. There are three levels. At the first level, all details of a pig are recorded in a logbook by the individual producer. The second level involves regular controls on certified producers by the IKB. The third level is the accreditation process which also has three dimensions: the IKB certificate, the control body and the IKB organisation are all separately accredited by the Dutch Council for Accreditation (RVA). The RVA is a member of a worldwide network of bodies accepted for accrediting products and services (www.vlees.nl). This market-driven label is crucial in the pig industry, since all major down-stream operators (butchers, supermarkets, etc.) only accept IKB certified pig products. As a consequence, almost all pork producers and other operators in the chain have to meet the requirements for IKB certification. Since none of these operators can supply its products to the next link in the chain without a certificate, the level of compliance with the IKB conditions is very high. This certification system was devised under a process of strong and equitable collaboration with all the players in the chain, and with a strong emphasis on practicality. The trust and willingness to cooperate between the partners in the chain increased as a result. It should be noted that the IKB system is a product control and not a system control approach (unlike, say, HACCP). Product control is less complex and only requires a basic level of proof (for example, that fodder comes from the right suppliers or that a veterinary surgeon checks the livestock regularly). Farmers can live with these rules and recognise the value added. By contrast, system controls require a lot of additional work, especially by the farmers, and this leads to some resentment of their utility (Bondt et al. 2003).

Contd...

Box 2 continued

The Future

The vision of the future on the part of the Ministry of Agriculture, Nature and Food Quality is that operators are primarily responsible for the quality of their products and they should organise themselves in product chains accordingly. The parties in the relevant chains have to make sure that production methods conform with the law and it is also their joint responsibility to respond to any weaknesses in the chain. Control is mainly in the hands of independent accredited organisations, and the government role is largely supervisory (Bondt et al. 2003).

References [both have English summaries]

Bondt, N. *et al.* 2003. Prikkel voor naleving van voedselveiligheidseisen. Report 7.03.02, LEI, Den Haag, December 2003.

CBS, 2004. Land- en tuinbouwcijfers, 2004. Centraal Bureau voor de Statistiek and LEI.

The specific conditions for such delegation, as laid down in the Regulation, are of some interest in the present context. The competent authority may delegate specific tasks to a control body only if:

- ‘There is an accurate description of the tasks that it must carry out and of the conditions under which it may carry them out
- There is proof that the control body has the expertise, equipment and infrastructure required to carry out the tasks delegated to it...
- And is impartial and free from any conflict of interest as regards the exercise of the tasks delegated to it.’ (Article 5)

Standard EN45004 clarifies the last condition further, in relation to ‘general criteria for the operation of various types of bodies performing inspection’, which include ‘independence and professional secrecy (confidentiality).’ The implication is clear: the body must be free not just from commercial but from all pressures that might affect its judgment when undertaking the control task in question, and free from any biases that might influence its findings. Thus, the ‘Draft Decision of adopting guidelines for the conduct of audits’ (882.2004) states:

‘The Audit Body should be free from any commercial, financial, hierarchical, political or other pressures that might affect its judgment or the outcome of the audit process. The audit system, audit body and auditors should be independent of the activity being audited and free from bias and conflict of interest.’
<http://www.food.gov.uk/multimedia/pdfs/scofcauditguidelines.pdf> (Art.5.3)

The document continues:

‘The following aspects of the audit process can assist in safeguarding the independence of both the audit body and the audit team:

- A clear and documented mandate, with adequate power, to conduct the audits
- No involvement by the audit body and the audit team in the management or supervision of the control systems being audited.’ (*Ibid.*)

The guidelines for the conduct of audits are elaborated further in the Draft Decision, and include the following:

- ‘**Systematic approach** - A systematic approach should be adopted and audits should measure compliance with planned arrangements. They should also assess the effectiveness of implementation of planned arrangements and whether the arrangements are suitable to achieve stated objectives. Reporting should be balanced such that it includes positive findings as well as areas for improvement and best practice should be identified and disseminated.
- ‘**Risk based approach/five year audit cycle** - A risk based approach should be adopted but it is also proposed that all competent authorities should be audited across all their activities within a five year period.

- **· On-site audit activities ('reality checks')** – It is recommended that assessments of the quality and consistency of official controls should involve on-site audit activities i.e. checks at feed and food premises etc ('reality checks').
- **· Independent Scrutiny** – In order to confirm that the audit process is achieving its objectives, it should be subject to scrutiny by an independent body.
- **· Transparency** – In order to demonstrate transparency of the audit process, documented procedures should be followed. Management and implementation of the audit process should be transparent to all relevant stakeholders. It is suggested that final audit reports, action plans and follow up reports are published.'

In a UK consultation organised by the FSA, particular concerns were expressed about a number of aspects of these Guidelines. For example, the unstated implications of the need for 'balanced' reporting, and the five year audit cycle. The former arguably suggests some weakening of resolve on the part of the authorities. The latter appears inconsistent with the principles of a hazards-based approach (which puts the emphasis on targeting specific areas of risk, not applying rules indiscriminately to all parties). The financial implications were also of concern to the extent that they implied added costs.

In other respects, the new EU requirements also seem under-formulated. For example, Reg.854/2004 allows for some relaxation of institutional arrangements with regard to inspection of operators such as slaughterhouses. Official auxiliaries may assist the official veterinarian with official controls, working as part of an independent team. In relation to poultry and lagomorphs, slaughterhouse staff may even assist with such work, if suitably trained, although they will need to ensure that they 'act independently from production staff' (Art.6.5/4-6). The criteria which will ensure such independence are not provided, however.

In summary, major changes are in the offing relating to the new EC legislation, which allow broader participation on the condition that independence is secured, although the conditions for such independence are, as yet, largely unspecified.

E. Conclusions

Food standards provide an interesting case study of verification in the interests of public safety and welfare. While food differs from the timber industry in some important way (particularly as regards its susceptibility to treatments which significantly affect the nature of the product), there are nevertheless several features in this case study that commend themselves in relation to verification systems design for the timber sector. The movement from a prescriptive to a hazards-based approach to control is of particular interest as are the opportunities for a constructive engagement between the authorities and the industry. The principle message to emerge is that systems design needs to follow from an appraisal of the principle risks and problems. A compromise has to be struck between the laudable aim to provide airtight controls and the need for these also to be realistic and practical. The ultimate test is that both the public and the industry recognise the positive value of the demands that are placed upon them.

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FSA 1.1 para 4

Art.6.5/4-6

Acknowledgements

The authors are grateful to Peter Hewson and Troy Sinclair (FSA, UK), Prof. Stuart Harrop (University of Kent) and André Wisselink (Deltacon) for their helpful inputs and comments.

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