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Executive Summary

- The BSE epidemic, which began in 1986, is now gradually coming to an end. Though knowledge is incomplete, enough is known about the disease to be reasonably confident that such an epidemic will not recur.
- Three principal questions remain unresolved: the origin of the BSE epidemic; the future of vCJD; and what to do with the 16 million tonnes of animal byproducts produced annually by the slaughter industry.
- Loss of value and cost of disposal of MBM exceed 1.5 billion Euro per year. Though new EU legislation could permit over 80% of this material to be used again in livestock feeds, the best option is to continue the ban on its use.
- The cost of the epidemic has been enormous, and is estimated here at about 10% of the annual output value of the European beef sector. The discounted present value of these costs is estimated at €92 billion.
- The progress of the epidemic was marked by many deficiencies and failures, of which two are particularly noted.
 - The inadequacies of public information, particularly in the UK
 - Failure to prevent international spread through contaminated meat and bone meal.
- Ongoing changes in the industry are documented: changing consumer requirements; concentration of processing and retailing power; declining producer prices, and reduction in numbers of full time producers. These changes represent both the causes and effects of a continuing shift in the terms of trade to the disadvantage of producers. To ensure fair trading, increased controls to prevent abuse of economic power may be necessary.
- The countries which are destined to join the EU have 40% more farmers than in the EU 15. The challenge of accommodating them in a common EU policy, market and budget has major implications for the existing EU livestock sector.
- European production costs for milk, red meats and cereals (the raw material for white meat production) are higher than in the traditional exporting countries for these commodities. This is partly due to relative scales of production units. With progressive trade liberalisation, continued pressure on producer prices is inevitable.
- Steady increases in unit scale and intensification, particularly in pig, poultry and dairy enterprises, have generated problems of nutrient overload in some regions. The industry will need to acknowledge and address these problems.
- In the present context it is ironic to note that the situation on animal disease in Europe has never been better. All major diseases are eradicated or under control. For the future the emphasis will be on the control of enzootic diseases, largely through husbandry practices; reduction, and eventual elimination of routine use of antibiotics in feeds; and intensive research to cope with emerging diseases.

- Scientists have lost credibility as a result of the BSE crisis. While it is more critical than ever that public policy be informed by the best scientific advice, those involved in providing such advice must more carefully identify and distinguish the factual basis from the value judgements involved.
- Scientific innovation has also lost favour with the public, particularly where it affects food and health. The livestock sector will need to weigh carefully the technical benefits against the risks and public acceptability of technologies such as GMOs, BST in milk production, growth promoters in meat production.
- Given that over 95% of European livestock production is destined for European consumers, the production industry must concentrate on securing their loyalty by fulfilling their expectations on
 - food safety;
 - transparency and accountability;
 - quality and variety, including response to the demand for regional and organic products.
- New ways need to be found to build the community of interest of producers, processors, and retailers in meeting these goals.

Conclusions

This report has been prepared, on behalf of EAAP, by a group of 14 persons, most of whom are scientists involved in and concerned for the European livestock production industry.

In assembling, analysing and interpreting the facts there has been general unanimity. Achieving consensus on the conclusions for the future of the livestock sector has been much less easy. This reflects the varying value judgements of the different members about the broad goals of society, of the sector, and therefore of the report. While the group possesses some expertise in presenting the facts, it claims no special moral authority in setting the goals. These are in any case extremely complex, and involve difficult trade offs between conflicting objectives, as well as between different interest groups.

Behind all this complexity is a major philosophical question: to what extent should future agricultural policy in Europe place food production in a free market context? Historical concerns about food security, and about the social and demographic structure of society, have put agriculture at the centre of EU policy. That policy has been protective of producers. It is now facing substantial change, with commitments to eventual global open competition. The expected benefits for society are chiefly lower food prices. The costs are more diverse, and include reduced incomes for European farmers, and longer, and therefore less transparent, food supply chains. The balance sheet of gains and losses, and of who the beneficiaries and losers are, has been insufficiently quantified and debated.

While the balancing of these interests is a matter for deliberation in the whole of society, policy is eventually crystallised into regulation through the political process. Given, and accepted, that progressively more unrestricted competition is the future, how can valued objectives such as ethical standards in production, authenticity or quality of product, or fair terms of trade be achieved? Since, under the free market, profit maximisation drives all decisions, it seems that these other objectives are unlikely to be served unless the regulatory framework makes them a requirement. Already, substantial change in this direction has taken place to guarantee food safety. A major task for the future is to debate and refine the regulatory context under which the European livestock sector can serve the broad goals of society. A particular challenge for those involved in the sector is to persuade society that food, and the rural environment in which it is produced, have values to the community beyond those of the cash register.

The BSE epidemic, which began in 1986, is now, with high probability, drawing to a close. Though 95% of cases occurred in one country, the economic impact has been felt equally by all beef producers in Europe. Up to 10% of the annual value of beef output has been lost (half through reduced animal value, half in additional costs for control measures). Though the epidemic will, in all probability end, much of the cost and loss will continue indefinitely. In present value terms, it is estimated at €92 billion for the 15 countries of the EU.

The experience of the epidemic has highlighted deficiencies in the production and processing industries, and in the public food safety structures. The dangers in recycling

industry waste as feed materials were not appreciated; excessive and opportunistic trading and movement of materials, animals and products was part of the system; identification and traceability were deficient. The response of the public authorities suffered from divided responsibilities, untransparent procedures, insufficient knowledge, and a culture of caution.

Several negative consequences have arisen from these deficiencies. Of prime import has been permanent damage to consumer confidence not just in beef, but in all foods. The reputation of the scientific establishment for providing objective and independent information has been severely downgraded in the public mind. Government authorities have been perceived as protecting sectoral interests rather than the public in general.

Positive outcomes include the wave of corrective measures at national and EU levels, and the establishment of new structures and authorities to bring greater supervision, accountability and integrity to the food chain. These positive developments, while they impose extra costs in the system, costs which will largely fall on primary producers, should be welcomed as necessary and overdue.

Three major unresolved questions remain. The first two concern BSE itself, the origin of which is still not known with certainty, and vCJD in humans, the future of which is also uncertain. The third unresolved issue is the future of MBM. At present all of the 16 million tons of raw material produced each year by the slaughter industry in the EU is rendered and destroyed at a cost exceeding €1 billion. Before BSE it had a protein feed value of more than €0.5 billion. New EU legislation would permit most of this to re-enter the feed industry.

However, despite the strongest of controls and guarantees regarding safety, there is great resistance to such a move. While the origin,

presence and transmission of BSE and associated TSEs in animal tissues, food and human bodies remain unknown, no absolute guarantees are possible. A greater influence against implementing such a re-introduction of MBM to the animal feed chain is the resistance of livestock producers rightly fearful of consumer reaction. The only realistic option for the immediate future of this issue is a continuation of the ban on MBM.

The BSE crisis was an unwelcome addition to a list of interrelated challenges already facing the European livestock production sector.

These include:

- Long term decline in real producer prices of about 3% per year.
- Changes in EU policy which will expose producers to increased competition from other areas of the world.
- A growing dependence for economic survival on politically sensitive subsidy programmes, paralleled by a declining influence of producers on policy formation.
- A major power shift in the food chain to dominant retailing and processing firms, further accentuating price pressure on producers.
- Increased costs for enhanced controls and compliance.
- Rapid changes in the pattern of consumer demand.
- Consumer distrust, fed by recurrent food scares, and amplified by a sensitised media.
- As the numbers of producers decline, and as the food chain lengthens and becomes more anonymous, the mutual knowledge and understanding between primary producers and ultimate consumers is reduced.
- A historical structure where three quarters of the 7 million farms in the EU do not have sufficient scale to provide one full-time work and income opportunity.

- The prospect of integrating the 10 million additional farmers in the 10 countries acceding to the EU.
- An intensity of land use in some areas that causes progressive nutrient overloading of the environment.

In the face of these formidable challenges, and energised by the BSE epidemic, European livestock producers, processors and the relevant public authorities have made substantial changes. New food safety agencies have been set up. All cattle and most sheep are identified. Traceability rules are being implemented. New controls on the feed industry have been introduced. Policy at national and EU levels has been adapted.

Many commentators, representing views among producers as well as consumers, feel that these adjustments are not enough. This view, articulated for example in the Curry Report in the UK, The Netherlands' Ministry Report, and in Hodges & Han, 2000, calls for more radical restructuring.

Many of their recommendations are aimed at returning to shorter, more local food chains, rewarding good practice and product quality, and responding to consumer expectations, particularly on safety. The dilemma for producers, policy makers and society is that market forces alone will not deliver these objectives. In particular, it serves the economic purposes of large processing and retailing firms to focus consumer trust on company brands rather than on products identified by region or production system. Companies also need to minimise the costs of these supplies, a goal often best served if their suppliers are producing an undifferentiated product.

The non-monetary values involved in livestock production (safety, ethical production, environmental protection, fair trade, conservation of rural society, respect for tradition, and others) are important. However,

it is quite ineffective to simply advocate respect for these values. They will be respected only if it is profitable to do so, or there are penalties involved in not doing so. In the context of this report it is not possible to describe or invent all the mechanisms required, but the general point is that it requires either profit or regulation. As the market is now evolving, profit is king. If the non-monetary values are to be respected, the free market needs to be circumscribed by formal requirements. The task for the future is to develop these so that they achieve their objective, without simply serving the interests of particular groups or increasing the burden of regulation to unreasonable levels.

Producers, processors or retailers are all most responsive if desirable practice is profitable and undesirable practice carries penalties. It is therefore important to emphasise the necessity of ensuring that public policy, through its standards and regulations, acknowledges and protects the non-monetary values which are part of the food production system. As a result of BSE, this is now well recognised for food safety. Similar initiatives are needed to define the standards of ethical production, environmental protection, and fair trade within which the market must operate.

While the broad evolution of the marketing structure is not favourable to these goals, there are many examples of how producer groups are working together with retailers to provide, and be rewarded for, quality products. This provides one model for recognising and supporting genuine differentiation in production. Already, the PDO and PGI systems, and certification for organic producers, are in place.

Another model is where the producers invest collectively in processing and distribution. This also already exists and is very effective in much of the EU dairy industry and in the

pigmeat sector in Denmark. Such large co-op structures can strike a fair balance between the interests of the producers and other actors in the food chain, and are perhaps the best way of re-establishing the connections that have been weakened. The livestock sector should value and continue to invest in the co-operative structures that have served European society well for over a century.

In all countries and at the EU level, legal constraints can be invoked where a dominant market position could lead to unfair trading practices or reduced competition. There is evidence (e.g. in UK) that dominant retail groupings exploit their strength to impose unreasonable terms on their suppliers. Given the pace of which food retailing (and processing) power is being concentrated, there is a strong case for closer monitoring and control of such abuse of economic power.

The question of food safety should not be an issue in the competitive market: all food should be safe. Some companies may wish to add to their customers' sense of security by adding guarantees, testing regimes and traceability above what is required by law. However, the basic safety certification of food and its production systems should be the responsibility of public agencies.

The failures which led to the BSE crisis have provided a hard lesson for all involved in the European livestock sector. A technical innovation (use of MBM), which had been judged safe, and had been widely used for more than 40 years, proved to be the instrument which spread a new and frightening disease in animals and humans. All scientific innovation is now suspect. This has strengthened public opposition to developments such as GM crops, use of BST in milk production, or growth promoters in meat production. Producers are often ambivalent – appreciating the technical advantages, but unsure on long term safety and

public reaction. Policy is driven mainly by these wider public attitudes. Present EU policies do not allow these technologies to be used. As evidence on food safety and other concerns accumulates, and as public attitudes change, these policies may also evolve. Livestock producers must work within these regulations. They must also recognise that Europe has chosen a deliberately cautious path, and that though they are precluded from taking advantage of some technical developments, this can be offset by increased consumer appreciation of and loyalty to local products.

Beyond the many difficulties which have followed from or been exacerbated by the BSE crisis, the European livestock sector has a fundamental problem of the scale of individual enterprises. Too many farms are too small to provide an income for one person. This structural problem will be made more acute by the continuous price reductions which will flow from the progressive globalisation of trade in agriculture. This is a problem for which there is no direct solution. Unit scale is increasing, but, as can be seen in USA, scale alone does not assure economic survival.

The inevitable further decline in numbers engaged in livestock production, and the parallel increase in scale of remaining production units, has no particular end point. It is a continuing process, shared by other sectors in an evolving world economy. For Europe, it leads to a spectrum of structures, varying greatly across the continent, but increasingly classifiable into two groups:

- efficient, full time, larger units, responsible for most of production, but representing a small fraction (at present one quarter) of producers
- smaller, part time, units, managing a high proportion of land, but only partially reliant on agricultural production for income.

EU policy is being adapted rapidly to meet the needs of society, and of these different sectors of production. The challenge is to manage change in a fair and balanced way, driven primarily by Europe's own requirements, and recognising that measured change, rather than stasis or abrupt adaptation can bring greatest benefits at least cost.

Despite the problems created by continuous adaptation, and by occasional crises such as BSE, the European livestock sector has a very positive future for many of its actors. Its strengths include:

- A well endowed resource base, with good climates and soils, well capitalised farms, and well developed services.
- A highly skilled workforce, mainly independent owners, with deep traditions of good husbandry, and with well developed organisational structures.
- A large internal market of 478 million, which takes 95% of its production, and appreciates its products.
- A common agricultural policy, through which measured change and progress can be made.