

Evaluation of the Community Animal Health Policy (CAHP) 1995-2004 and alternatives for the future

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Final Report

Part II: Pre-feasibility study on options for harmonised cost-sharing schemes for epidemic livestock diseases

Prepared by:

Food Chain Evaluation Consortium (FCEC)

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*Part II: Pre-feasibility study on options for harmonised
cost-sharing schemes for epidemic livestock diseases*

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EXECUTIVE SUMMARY

Civic Consulting of the Food Chain Evaluation Consortium has conducted a pre-feasibility study on cost-sharing schemes for epidemic livestock diseases in the framework of the evaluation of the Community Animal Health Policy. The study evaluates the current Community financing of epidemic livestock diseases, scrutinises selected existing cost-sharing schemes in Member States and analyses to which extent harmonised cost-sharing schemes could be a viable option to prevent major financial risks for Member States' and the Community budget. The study is based on a survey of insurers in EU MS, interviews, case-studies in three MS (Netherlands, Germany, Spain) and an economic analysis of options for a harmonised EU framework for cost-sharing schemes. Preliminary results were presented in a working paper at a stakeholder workshop on 17 March 2006 in Brussels and the comments received were taken into account in the final version of the study.

During the evaluation period (1995-2004) the system of EU co-financing of losses caused by major disease outbreaks was a mixture of ad-hoc compensation through exceptional market support measures and loss-based compensation for veterinary emergency measures as defined in Council Decision 90/424/EEC (the "Veterinary Fund"¹). The analysis indicates that financial ad-hoc measures in case of an outbreak do not provide incentives for prevention to the parties involved and do not promote proper disease risk management planning. The system of expenditure in the veterinary field defined by Council Decision 90/424/EEC represents an improvement over ad-hoc measures, because compensation rules are pre-defined. The system has been further developed by Regulation 349/2005, which creates clearer rules for compensation and reduces "grey areas" that existed during the evaluation period. However, the current framework is still characterised by some deficiencies:

- Community co-financing is loss-dependent, which may distort competition in favour of high-risk areas. Roughly 85% of the 989 million € spent from the "Veterinary Fund" between 1997-2005 were used for co-financing emergency measures in two MS. Although Community co-financing may provide incentives for effective and rapid control measures, it does not seem to provide incentives for prevention, especially with respect to prevention measures that are above the minimum standards required by legislation;
- Disease outbreak losses are compensated only partially, focusing on direct losses such as the culling of infected herds, slaughtering and rendering costs etc. This may result in adverse incentives under certain circumstances, because operators with infected herds may be better off than operators under veterinary movement restrictions;
- Community co-financing rules are complex and partially require significant administrative efforts for all parties involved;
- The risk of livestock disease outbreaks to the Community budget has possibly been reduced because of clearer compensation rules, however in principle the current system of co-financing still poses a significant risk for the Community budget;
- Participation of stakeholders in the decision-making process concerning veterinary emergency measures is not encouraged and fully depends on MS implementation rules and the degree to which cost-sharing schemes are already in place at MS level.

¹ We will refer in the following to the "Veterinary Fund", although technically speaking, the "Veterinary Fund" is not an actual fund but a summation of budget line 17.0403

Current cost-sharing schemes in EU Member States are very diverse in their focus and institutional set-up. Farmers' financial responsibility for direct losses differs among the systems in the three countries analysed in depth. For example, through their contributions farmers in the Netherlands fully cover direct losses up to a certain limit. The share of financial responsibility for larger outbreaks depends on their magnitude because the government bears all direct losses above pre-defined ceilings. Through the system of *Tierseuchenkassen* German farmers bear half of the direct losses that are not reimbursed by the Community while farmers in some other MS do not bear direct losses due to epidemic livestock diseases. These differences between Member States could contribute to possible distortions of competition. Anecdotal evidence seems to indicate that the mere existence of a cost-sharing system provides incentives for farmers to consider more effective bio-security measures. The involvement of farmers' organisations in negotiating compensation conditions in "peace time" and/or in the management of the scheme also provides the possibility of both setting and communicating prevention priorities. At an individual level, incentives very much depend on the details of the compensation rules applied. For example, farmers in the Netherlands do not receive compensation for animals that are dead at the first visit of the veterinary authority and only half of the animal value for animals with visible disease symptoms. Rules like these are likely to provide additional incentives for rapid reporting of disease outbreaks to the veterinary authorities.

Options for a harmonised EU framework for cost-sharing schemes were analysed on the basis of six criteria:

- I. *Categorisation of animal diseases* – the public interest in managing risks associated with a particular disease depends on possible public health and/or economic impacts of an outbreak.
- II. *Efficient risk transfer and incentive compatibility* – Compensation rules for disease outbreak losses have to encourage risk-reducing behaviour of all parties involved.
- III. *Balancing costs and responsibilities* – Government intervention is needed to facilitate cost-sharing, while taking into account subsidiarity. Social aspects have to be considered.
- IV. *Prevention of distortion of competition* – Cost-sharing schemes should be harmonised to the extent necessary and not lead to a distortion of competition between MS.
- V. *Compatibility with EU requirements* – Cost-sharing schemes should operate within a framework for state-support that takes into account EU and WTO requirements.
- VI. *Effectiveness and flexibility of implementation* – A harmonised EU framework should support effective disease control while allowing flexibility of implementation in MS.

Taking into account these criteria and the analysis in section 5 the pre-feasibility study has concluded that:

⇒ ***Developing an EU framework for harmonised cost-sharing schemes is a feasible option.*** A system of harmonised schemes for the sharing of responsibilities and costs of epidemic livestock diseases could contribute to preventing major financial risks for Member States' and Community budgets, enhancing the welfare of operators and providing incentives for prevention. Whether these benefits can be achieved in practice depends on the details of the operational principles that have to be defined at EU level and on their implementation at MS level.

The aim of cost-sharing schemes: Covering operator's risk of disease and minimising total costs and losses of disease outbreaks over time

Existing compensation schemes are mainly focused on providing a compensation mechanism for operators in case of disease outbreak. Only very rarely are prevention measures supported. The lack of

financing of prevention measures may in some cases lead to inefficiencies, as the total costs of an outbreak might be higher than what it would have cost to prevent the outbreak of the disease or contain it at an early stage by applying appropriate bio-security measures. An *efficient cost-sharing scheme*, however, takes such considerations into account and aims to minimise the sum of total costs and losses of disease outbreaks and costs of prevention and control measures over time, besides covering an operator's risk of disease. A cost-sharing scheme is more than just a compensation mechanism; it is also an arrangement for promoting efficient prevention and control measures by governments and operators.

Currently the setting of legislative standards is a common instrument to ensure animal health in the Member States. A legal standard should only be considered if such a standard would be efficient for each farm in the country that has to implement it. However, efficiency of many measures may differ at regional and farm level. It is, for example, likely that in "intensity hot spots" efficient on-farm bio-security standards are higher than in regions with low farming intensity, because an outbreak in a hot spot causes higher costs and losses. Efficient standards therefore need to take into account regional factors. Compulsory insurance can work as a mechanism to induce operators to determine and implement efficient on-farm bio-security standards that are beyond legal requirements and consider public benefits. This is also illustrated by existing cost-sharing schemes: The participation in both the German and the Dutch scheme is compulsory for operators. A complementary way of government intervention to ensure efficient animal disease risk management is to subsidise prevention measures. Both such instruments could be applied by cost-sharing schemes.

Based on the analysis in section 5.3 the pre-feasibility study concludes:

- ⇒ ***Cost-sharing schemes could promote bio-security standards that are higher than legal standards, when this is efficient.*** The reason for this is that efficient standards may differ between farms or regions. Cost-sharing schemes should therefore be free to provide incentives for higher bio-security standards through premium reduction and subsidising prevention measures, to induce operators to conduct efficient on-farm prevention.
- ⇒ ***Participation of operators in a cost-sharing scheme has to be compulsory.*** A cost-sharing scheme can take into account public benefits of disease control and promote efficient on-farm bio-security measures through differentiation of contributions, under the condition that participation in the system is compulsory.
- ⇒ ***A cost-sharing scheme could include farmers as well as other operators from the livestock industry (e.g. traders).*** However only those operators that are compensated for disease outbreak losses should contribute to a cost-sharing scheme. Inclusion of parties other than livestock producers has to be judged on the balance of benefits and costs². It is best practice that operators taking financial responsibility through a cost-sharing scheme participate in decision-making.

Responsibility for public intervention: Categorisation of livestock diseases

Responsibility for public intervention depends on possible impacts of a specific disease on public health, animal health and the wider economy. The higher the public benefits of prevention and control measures become the more justifiable government intervention becomes. In this context possible dimensions for disease categorisation would be:

² For a more detailed discussion of this issue please refer to section 5.5.5.

- *Public relevance:* possible impacts of the diseases on public health, animal health/welfare, the environment and the wider economy, depending on factors such as contagiousness, zoonotic potential, and trade relevance;
- *Need for EU coordinated action:* For certain diseases coordinated EU action is required. For other diseases an outbreak would potentially only have economic and/or public health impacts that are regionally limited;
- *Relevance of on-farm bio-security measures:* For specific diseases bio-security measures of operators hardly have any influence on risk. However, for other diseases the risk of outbreaks can be significantly influenced by operators' on-farm bio-security measures.

Disease categorisation is also relevant for other aspects of policy, e.g. for setting priorities for eradication programmes. Consideration could therefore be given to drawing on existing disease categorisation systems and developing these further to provide a basis for an EU wide disease categorisation system that can serve multiple purposes.

Based on the analysis in section 5.4 the pre-feasibility study concludes:

- ⇒ ***A compulsory cost-sharing scheme only needs to cover animal diseases with high public relevance.*** For some diseases there is a high responsibility for public intervention because of possible significant negative impacts on public health, animal health/welfare, the environment and the wider economy, depending on factors such as contagiousness, zoonotic potential, and trade relevance. These diseases would have to be included in a cost-sharing scheme.
- ⇒ ***Disease categorisation should take into account the degree to which coordinated action at EU-level is required, or action at MS-level alone is likely to be sufficient.*** In line with the principle of subsidiarity the responsibility for coordination of disease prevention and control should lie at the lowest appropriate level.
- ⇒ ***Cost-sharing schemes have to be regionally oriented.*** Disease risk differs between regions in the Community. A cost-sharing scheme designed to efficiently manage animal disease risk should therefore take into account regional differences and preferably be set-up at national or regional level. Regional orientation does not necessarily restrict the geographic scope of a cost-sharing scheme to a small area. It is e.g. possible that one scheme is established for several smaller MS, provided that regional factors determining efficient animal health risk management measures are taken into account and a common approach for implementation can be identified.
- ⇒ ***A comprehensive EU disease categorisation system would facilitate harmonisation.*** Such a categorisation system would make it easier to set priorities for eradication and prevention programmes and create clarity for which diseases compulsory participation of operators in a cost-sharing scheme is required. An institutional mechanism at EU level to regularly review categorisation would also allow emerging diseases to be taken into account.

Operator contributions to a cost-sharing scheme: Providing incentives for prevention

Operator contributions to a cost-sharing scheme have to be adjusted for risk. If this is not done operators with lower risks and high bio-security standards would finance the higher risks of operators with lower bio-security standards. Three general elements of risk adjustment seem to be practicable:

- *Number of animals* in the herd. An operator's contribution to a cost-sharing scheme has to be proportional to the operator's number of animals.

- *Type of animal:* It is useful to differentiate contributions by species and define animal types for each species to approximate animal value. Within one species, animal types could be differentiated according to age groups and/or usage, weight, additions for high quality etc., when animal values depend strongly on these factors.
- *Regional risk adjustment:* Can be achieved by matching the sum of past compensation payments in a specific region or district with the sum of contributions of the farmers from that specific region or district in the same period.

A further differentiation of contributions would depend on whether an operator applies risk-reducing production practices. This could be done through a bonus system.

⇒ ***Operator contributions to a cost-sharing scheme have to reflect their individual risks.***

Practicable criteria to determine individual risks include the *number of animals, types of animals* and a *regional risk adjustment*.

⇒ ***Cost-sharing schemes should provide incentives for additional bio-security measures through safety bonuses and disease-free bonuses.***

Cost-sharing schemes could reward observable bio-security measures through a safety bonus (e.g. premium reduction for all-in-all-out pig production). For prevention measures that are not easily verifiable a disease-free bonus should be established to provide additional incentives for bio-security.³ The bonus could be granted as soon as there were no disease-outbreaks in a certain period of time, e.g. one year. It should then increase as the disease free period increases. Once a disease outbreak occurs at the farm, the bonus would have to be cut immediately.

Compensation payments of cost-sharing schemes: Increasing welfare of operators

Livestock diseases are a major risk for operators. Economic theory provides a clear answer to the question of what an operator whose assets and income are at risk should do: It is welfare enhancing to completely insure such risk, provided there is an organisation which would cover the risk for a premium that amounts to the expected value of the risk of the operator or a little more to make up for the costs of administration. Any type of cost-sharing scheme that transfers disease risk away from operators is therefore welfare enhancing for operators. The welfare improvements of insurance are not limited to certain sub-categories of costs and losses. In order to maximise welfare gains for operators, a cost-sharing scheme should cover costs and losses as completely as is feasible.

Livestock disease outbreaks may cause the following costs and losses for livestock operators:

Disease outbreak losses: (1) Stamping-out of infected herds; (2) Pre-emptive slaughter of contact herds, welfare slaughter; (3) Partial loss of animal value due to control measures such as compulsory emergency vaccination or moving or marketing restrictions causing excessive maturity for slaughter; (4) Costs of slaughter and rendering, disinfection and other direct disease control costs; and (5) Business interruption costs and additional expenses directly related to established restriction zones.

³ Contributions for costs and losses from diseases where the risk of infection is independent from bio-security measures of operators should not depend on disease-freeness and safety bonuses. Incentives for efficient on-farm prevention are not needed since prevention measures do not make a difference in managing the risk of these diseases.

Price risks: Partial loss in animal value due to price decreases on markets caused by disease outbreaks and/or higher replacement costs.

The scale of disease outbreak losses depends directly on restrictions imposed by veterinary authorities. They only accrue to operators in regions directly affected, i.e. operators with infected herds and operators located in a restriction zone. Existing compensation schemes in the EU mainly provide coverage against some types of disease outbreak losses (e.g. the value of the animal), but other losses related to restriction zones (in particular business interruption costs) are not sufficiently covered (if one does not take into account exceptional market support measures, which are basically ad-hoc measures with the previously highlighted disadvantages). The existing compensation system is therefore inefficient with respect to risk transfer, since costs and losses due to restriction zones can amount to a significant part of an operator's total losses. Moreover, these compensation schemes may provide adverse incentives. As has been pointed out above, under certain circumstances operators with infected herds may be better off than operators with healthy herds under veterinary movement restrictions. This may impede the use of effective measures to contain the spread of the disease. Therefore cost-sharing schemes should base compensation payments on the sum of all disease outbreak losses.

It should be noted that the position differs with respect to price risks. These should not be covered by a cost-sharing scheme. If a cost-sharing scheme were to cover the price risks of operators under veterinary restrictions, it would be possible that operators whose herds were infected or located in a restriction zone could be better off than other operators not under veterinary restrictions. The reason for this is that price movements do not stop at the borders of restriction zones, they also affect other regions or even nations. An appropriate coverage of price risks in a cost-sharing scheme that avoids adverse incentives would therefore have to involve compensation for all farmers affected by outbreak-related price movements. In such an event the financial commitment of cost-sharing schemes covering price risk would potentially be greatly increased and could become uncontrollable.

In section 5.5.2, the pre-feasibility study has assessed specific compensation rules that prevent adverse incentives and promote early disclosure of disease outbreaks:

- ⇒ ***A cost-sharing scheme has to cover all disease outbreak losses of operators directly affected by veterinary measures (except price risks).*** This avoids the creation of adverse incentives and ensures efficient risk transfer. Total and partial losses in animal value as a direct consequence of veterinary measures could be covered (e.g. caused by compulsory slaughtering, emergency vaccination), as well as other costs of operators due to such measures (e.g. costs of slaughter, disinfection, business interruption).
- ⇒ ***Losses of animal value have to be indemnified according to market prices at the time of slaughter.*** To guarantee swift compensation and avoid adverse incentives, cost-sharing schemes have to follow or deduce regional market prices for all animal types covered. To prevent speculative price movements pre-crises market values could be used as a cap for compensation, whenever market prices move up after a disease outbreak.
- ⇒ ***Compensation payments for total losses due to emergency slaughter of infected herds have to depend on the prevalence-rate of the disease.*** The share of diseased animals in a herd, i.e. the prevalence-rate, can serve as a signal for the time-lag between the time when first symptoms could have been detected and the time of reporting. If the prevalence rate at the time of notification is not higher than the acceptable rate of visibly diseased animals, losses should be compensated for completely. Compensation payments should be significantly reduced when the prevalence rate is higher. The *acceptable rate of visibly diseased animals* would have to be defined for every disease covered under the cost-sharing scheme, depending on the unambiguousness of disease symptoms,

the contagiousness, length of the incubation period, and probably other factors. Such a compensation rule would provide incentives for early disclosure of disease outbreaks.⁴

- ⇒ ***Direct disease control costs of operators such as disinfection costs could be indemnified completely.*** This type of loss could be fully indemnified in a cost-sharing scheme that aims at providing the highest possible risk transfer to farmers, preferably according to pre-determined flat rates to reduce the risk of inflated prices during crisis situations.
- ⇒ ***Business interruption losses and other costs directly related to regulatory restrictions could be indemnified on the basis of daily flat rates.*** Rates could be negotiated between operators and the cost-sharing scheme to be adjusted in line with the operators' needs (with higher flat rates implying higher contributions of the operator to the scheme).
- ⇒ ***Price risks should be excluded from the costs and losses covered by cost-sharing schemes.*** Alternatives to cover animal product price risks are financial derivatives such as futures and options, private insurance solutions or public market support measures. One option would be to develop "safety-nets", e.g. through the provision of public support for the development of adequate insurance markets⁵. The participation of operators in a safety net could be voluntary, because it is a management decision that only affects the operator, unlike on-farm prevention induced through compulsory participation in a cost-sharing scheme. Compensation mechanisms for price risks should, however, not be related to cost-sharing schemes for disease outbreak losses.

A harmonised framework for cost-sharing schemes: Leaving room for flexible implementation

Member States currently feature various arrangements to cover losses from animal disease risk. The most feasible approach seems to be to define a harmonised Community framework for national or regional cost-sharing schemes, which could have different institutional set-ups, but would have to function according to harmonised principles. This would allow for flexibility of implementation by the Member States and at the same time be likely to increase acceptance amongst stakeholders, as participation mechanisms are easier to implement at the national or regional level. Possible institutional arrangements for covering losses from animal disease outbreaks can either be publicly or privately organised. Options analysed in the framework of this pre-feasibility study include *public funds* set-up and operated by Member States or regional governments, *mutual funds* operated by farmers' associations and cost-sharing schemes that involve *private insurers*. It is generally feasible to combine two or more options within one cost-sharing scheme, e.g. through creating hybrid forms or through dividing animal health risk and putting different cost-sharing schemes in charge of different elements of the risk. For example, it would be possible to combine a public fund that compensates the value of culled animals with compulsory private insurance for other costs such as business interruption losses. However, if a combination based on dividing risk is considered, it should be noted that total transaction costs are likely to be higher compared to a single cost-sharing scheme.

Based on the analysis in section 5.6 the pre-feasibility study concludes:

⁴ Prevalence rate-dependent compensation rules have to be carefully designed. This is particularly true when the cost-sharing scheme involves a disease-free bonus as recommended above. An adverse incentive could result to not report an outbreak in order to save the disease-free bonus. In order to avoid this, an operator's disease-free bonus should not be forfeited when the operator reports a disease before a restriction zone is established that includes the operator's premises.

⁵ This has been suggested in the 2005 Communication from the Commission to the Council on risk and crisis management in agriculture COM(2005) 74 final of 09.03.2005, Communication on risk and crisis management in agriculture

⇒ ***A harmonised EU framework for national and regional cost-sharing schemes is needed, but this does not determine the institutional arrangements.*** Options for institutional arrangements include:

- **Public fund:** A fund administered through a public authority.
- **Mutual fund:** A mutual fund or insurer owned by the participating operators.
- **Private insurers:** Participation of private insurers in a scheme.

The decision concerning the most appropriate institutional arrangement for a national or regional cost-sharing scheme has to be taken in line with the principle of subsidiarity at the MS level.⁶

Public financial support to cost-sharing schemes: Avoiding distortion of competition

Bio-security does not only depend on bio-security measures taken by farmers and other operators. The effectiveness of controls on tourists entering the Community and on commercial trade flows can also have an impact on the degree of exposure of operators to exotic diseases pathogens. There is a clear responsibility of EU or Member States' governments for public prevention and control measures to manage the risk of publicly relevant diseases, which is the reason that public prevention and control measures (including border control, eradication programmes, costs of veterinary service etc.) are generally not to be funded from contributions of operators to a cost-sharing scheme, but rather from tax revenues. The EU "Veterinary Fund" was developed as a tool for an additional public financial involvement in the compensation of operators for disease losses, and to ensure effective and rapid control measures in case of disease outbreaks. In the consultation with stakeholder organisations there was a strong interest expressed by all parties involved to keep in place the "Veterinary Fund" as an instrument of EU intervention. However, the current system is characterised by the fact that it systematically subsidises high-risk regions, where outbreaks occur more often and/or are more costly than average. This is problematic as it distorts competition in favour of operators in high-risk regions⁷. Subsidisation of a cost-sharing scheme therefore has to be carefully designed in order to avoid a distortion of competition between farmers in different Member States.

Based on the analysis in section 5.7 the pre-feasibility study concludes:

⇒ ***Public financial support to cost-sharing schemes has to be harmonised to reduce potential distortions of competition.*** Harmonised rules have to determine the sum of financial support from the EU and from Member States to a cost-sharing scheme, so that potential distortions of competition are reduced, since public financial support could imply a systematic subsidisation of high-risk areas.

⇒ ***Public financial support for compensation payments of cost sharing schemes must be limited so that farmer's contributions fund a significant share of the cost-sharing scheme's expenses.*** A cost-sharing scheme has to provide incentives for risk-adjusted farm management decisions through differentiating contributions. This implies that a significant share of a cost-sharing scheme's compensation payments would need to be funded through farmers' contributions to the

⁶ Including the option that several smaller MS decide to set up a joint scheme.

⁷ A high risk region is not necessarily a region where bio-security measures are lower. A major contribution factor is the herd density. This has a significant effect on the expected maximum losses. These can be much higher in "intensity hot spots".

cost-sharing scheme. Other expenses of a cost-sharing scheme, e.g. expenses for subsidising certain prevention measures, could be fully reimbursed from public sources.

⇒ **Public financial support to cost-sharing schemes and compensation rules has to take into account EU state aid rules and WTO requirements.** This implies, *inter alia*, that compensation payments of cost-sharing schemes can only be provided for losses arising from diseases for which an outbreak has been formally recognised by public authorities and that subsidising prevention measures does not involve direct payments to farmers.

⇒ **Rules for public financial support to cost-sharing schemes should be designed in a simple and transparent manner.** Compensation rules of a cost-sharing system for the indemnification of operators require a certain level of complexity to ensure that operators with infected herds are not better or worse off than other operators. Member State and Community financial support to a cost-sharing scheme, however, does not need to reflect this complexity and should be designed as simply as possible.

Options for public financial support to cost-sharing schemes: “peace time” or loss-dependent?

There are two main possible approaches for public financial support to cost-sharing schemes: Peace-time support depending e.g. on the number of animals/operators covered by a scheme and loss-dependent support in case of disease outbreaks (the current situation). Peace-time support of cost sharing schemes would have a number of advantages:

- Peace time support to cost-sharing schemes would not distort competition in favour of high-risk areas;
- This approach could combine funding of the current “Veterinary Fund” with funding that would otherwise be used for exceptional support measures relevant for farmers in restriction zones. This would increase predictability for all parties, including operators, that currently cannot predict whether negotiations in case of a large-scale outbreak will lead to relevant exceptional market support measures;
- The administrative burden would be significantly reduced for all parties involved, including operators, Member States and the Commission;
- Time for compensation of disease losses of operators would likely be reduced, as most related procedures could be administered at the level of the cost-sharing scheme;
- The risk for the Community budget would be reduced to a level agreed in the EU decision making process in “peace time”, reducing pressure that could result when such negotiations are conducted during a large-scale disease outbreak;
- Peace-time support could provide a permanent incentive for Member States to set up a cost-sharing scheme that follows harmonised requirements.

The decision whether a peace-time or a loss-dependent financing approach is taken is economic in nature. The potential distortion of competition arising from co-financing of losses can lead to a continuation of unsustainable and inefficient livestock production structures. On the other hand, a lack of loss dependent co-financing could under some circumstances contribute to ineffective control of animal disease outbreaks, which could in turn prolong the duration and increase total costs and losses of a disease outbreak. Any approach taken has to balance these costs. Ultimately it is a matter of policy making, which also has to take into account social aspects of different subsidisation systems. It would also be possible to decide at the political level to add a “new Member State bonus” to the system to allow for higher rates of public support and/or Community co-financing to cost-sharing

schemes in some new Member States where conditions may not yet be sufficient to enable contributions at similar levels as in other Member States. However, it is suggested that in all cases operators should finance a significant share of losses through contributions to ensure adequate provision of incentives for prevention through cost-sharing schemes.

Based on the analysis in section 5.7.5 the pre-feasibility study concludes:

⇒ ***Public financial support to cost-sharing schemes could be either peace-time or loss dependent.***

Possible options for public financial support to cost-sharing schemes include:

- **Option A:** Peace-time support;
- **Option B1:** Co-financing of losses excluding business interruption costs;
- **Option B2:** Co-financing of losses including business interruption costs.

It is also possible to combine different options in a two-stage approach where loss-dependent public financial support would be continued for a limited period of time before gradually shifting to the more advantageous peace-time support when cost-sharing schemes are fully operational in all Member States.

Financial feasibility of cost-sharing schemes: Public loans to back up disastrous losses

Animal health risk is highly cumulative, which means that one loss event can trigger other loss events. Even after several disease-free years, a cost-sharing scheme might not have the financial capacity to bear the losses of a catastrophic outbreak on its territory, which could lead to compensation payments that amount to multiple yearly incomes and exceed the sum of contributions and reserves available for compensation payments. There are two possible solutions to address this problem. A cost-sharing scheme could use additional sources of funding that rapidly provide sufficient capital to cover catastrophic losses. The alternative is to establish a ceiling on compensation payments: the cost-sharing scheme would only compensate losses up to a pre-defined level. The former implies that the risk of a catastrophic outbreak is fully borne by the cost-sharing scheme and the party providing these emergency funds, the latter leaves it mainly to the operators. It is obvious, however, that farmers and other operators have the least capacity to bear the catastrophic part of animal health risk, since it can take an existential magnitude and could lead to bankruptcy and other tragedies. The other options are that this risk is covered by private re-insurers or the government. The most feasible approach seems to be at this stage that the Community or Member States governments provide a loan at predefined conditions regarding the pay back period and the interest rate applied as soon as a cost-sharing scheme is unable to pay compensation.

Based on the analysis in section 5.8.3 the pre-feasibility study concludes:

⇒ ***The Community or Member States could provide contingent capital to cost-sharing schemes on their territories if their funds run dry.*** As animal health risk is highly cumulative, it is likely that cost-sharing schemes in some cases are unable to meet all claims for compensation after a major disease outbreak. A public loan provided to a cost-sharing scheme at predefined conditions regarding the pay back period and the interest rate, is an adequate funding mechanism with low transaction costs. Contingent capital would need to be provided at harmonised conditions to prevent a distortion of competition. Further analysis of options for the provision of contingent capital is required. The ongoing reform process of EU insurers' solvency requirements (Solvency II) has to be taken into account when a system to back up cost-sharing schemes for disastrous events is developed.

Budgetary implications: “Peace time” support limits public contributions to disease losses

Currently animal health risk for direct losses lies with the government in most Member States, with a significant part co-financed by the Community. Operators themselves mainly cover other losses such as business interruption costs. Therefore total risk is currently already shared between public institutions and operators. The three financial options described above determine which part of the total losses would in future be carried by the public sector and which part of the losses would lie with the collective of operators covered by a scheme.

Based on the analysis in section 5.8.4 the pre-feasibility study concludes:

⇒ ***Whether cost-sharing schemes prevent major financial risks for Member States’ and the Community budget depends on the option chosen for public financial support.*** Financial option A (“*peace time*” support) limits the amounts of disease outbreak costs and losses borne by Member States’ and Community budgets to a politically agreed level. Option B1 (*co-financing of losses excluding business interruption costs*) may not imply an increase in the share of disease outbreak costs and losses borne by Member States’ and Community budgets, whereas option B2 (*co-financing of losses including business interruption costs*) could imply an increase in the share of disease outbreak costs and losses borne by the public. The option chosen for public financial support is, however, not related to the compensation rules that have to be applied for the compensation of individual farmers by the cost-sharing scheme (see table on the next page).

It should be emphasized that under all options the obligation to provide contingent capital to a cost-sharing scheme is a serious financial commitment for Member States, which could result in the obligation to provide a large-scale loan of one billion Euro or more in a worst case scenario. However, one party has to provide this risk-bearing capacity. Farmers are the most inappropriate party to bear disastrous risk, since it can devastate their livelihoods, unlike governments. Except from the provision of contingency capital, which would have to be repaid over time by the cost-sharing scheme, this system will not require undue levels of public funding. Of course, in case of a large-scale outbreak pressure to convert the government loan into an ad-hoc payment has to be resisted. Provided that conditions for repayment of the loans are harmonised, this system will also minimise a potential distortion of competition between operators in different Member States.

Table 1: Overview of loss category, compensation payments to operators and possible options for public contributions to cost-sharing schemes (CSS)

Cost/ Loss category	Description	Compensation of operators by the cost-sharing scheme in case of disease outbreak	Public co-financing of CSS		
			Option A: Peace-time support	Option B: Co-financing of losses	
				B1	B2
<i>Prevention costs</i>	Bio-security measures	To be borne by operator, some prevention programs covered by CSS and e.g. rural development measures	Public financial support based on pre-defined criteria such as number of animals/operators covered by CSS, relevance of prevalent diseases, programs proposed etc.		
<i>Disease outbreak losses caused directly by restrictions imposed by veterinary authorities</i>	Stamping-out of infected herds	Partial compensation, depending on time of reporting, based on animal value at time of slaughter	<u>Regular public financial support</u> based on pre-defined criteria such as number of animals covered by CSS to cover operating costs and to create a fund for future outbreaks	<u>Fixed percentage</u> of public contribution to animal value compensated by the scheme, possibly depending on disease category	
	Pre-emptive / welfare slaughter	Full compensation of animal value			
	Partial loss of animal value due to e.g. emergency vaccination	Full compensation of loss in animal value			
	Costs of slaughter and rendering, disinfection etc.	Full compensation or predefined flat rate		Public financial support to the scheme based on predefined <u>flat-rates</u>	
	Business interruption costs	Predefined flat rate		<u>No public contribution</u>	<u>Flat-rate contribution</u>
<i>Price risks operators</i>	Drop in animal value due to disease outbreaks	Not covered			
<i>Losses other sectors</i>	Direct and indirect losses of other sectors	Not covered			

1. Introduction

1.1. Aims of the study

In 2005, a Communication from the Commission to the Council on risk and crisis management in agriculture was published⁸ in which the Commission suggested that the potential of different options should be assessed to replace ad hoc emergency measures in the event of livestock epidemics permitted under current legislation. Against this background, the evaluation of the financial framework of the Community Animal Health Policy not only involves an analysis of the present financial instrument's capacity to handle the consequences of epidemic livestock disease outbreaks, but also addresses whether "insurance schemes" or other similar financial schemes (hereafter referred to as cost-sharing schemes) covering direct and/or indirect costs can be considered as viable options to prevent major financial risks for the Member States or for the Community budget. To assess the feasibility of options for harmonised cost-sharing schemes for epidemic livestock diseases, Civic Consulting⁹ of the Food Chain Evaluation Consortium has conducted a pre-feasibility study, the results of which are presented in this report.

1.2. Structure of the report

The structure of this report is as follows: Section 2 details the methodology employed for the study. Section 3 provides a description of the Community financial instrument to support veterinary emergency measures in case of livestock diseases throughout the evaluation period. This section evaluates the appropriateness of the financial instrument (Council Decision 90/424/EEC) and analyses the incentives provided by Community co-financing of related measures. Section 4 presents existing cost-sharing schemes in the EU and case studies of three MS compensation schemes (the Netherlands, Germany, and Spain). Main elements of these schemes are considered in the economic analysis of options for harmonised cost-sharing schemes that is presented in Section 5. Several Annexes include the results of an insurers' survey conducted in the framework of the study and the working paper presented to an expert and stakeholder working group as well as the responses received to that paper.

1.3. Acknowledgements

Civic Consulting would like to use this opportunity to express its gratitude to all supporters: European associations of insurers CEA, AISAM and ACME and their members, that provided valuable input through a joint survey and several meetings. Experts from both insurers and Competent Authorities were particularly helpful for the case studies on cost-sharing schemes in the Netherlands, Germany and Spain. We would also specially like to thank the participants of the workshop on 17 March in Brussels and their valuable feedback following the workshop. This analysis would not have been possible without these expert opinions and advice. Finally, we thank DG SANCO and the Steering Group for the support provided throughout the evaluation.

⁸ COM(2005) 74 final of 09.03.2005

⁹ The economic analysis of options presented in section 5 of this report was developed jointly by Civic Consulting and the Institute for Risk and Insurance at the University of Hamburg, Germany

2. Methodology

2.1. Methodological approach and objectives

Throughout the process of the pre-feasibility study, analysis of data has been based on the following resources:

- Literature review of existing studies and reports of the European Commission;
- Review of existing studies and reports by government institutions, academic institutions and other independent experts;
- Expert and stakeholder interviews;
- Questionnaire survey of insurers and insurance associations, supplemented by interviews;
- Three in-depth case studies of existing cost-sharing schemes;
- Economic analysis of options for harmonised cost-sharing schemes for epidemic livestock diseases;
- An expert workshop on initial results of the analysis of the evaluation team.

More details on the resources used for the study and the methods employed are presented in the following sections.

2.2. Survey of insurers and selected authorities

A systematic investigation into current cost-sharing schemes in the EU was based on a joint questionnaire survey held by the evaluation team in cooperation with the European associations of insurers CEA, ACME, and AISAM to their members. This questionnaire surveyed the institutional and technical elements of varying compensation schemes for epidemic livestock diseases as well as insurers' opinions on the feasibility and the demand for future development of insurance products.

Three countries (the Netherlands, Spain, and Germany) were selected for in-depth case study analysis based on the diversity of their cost-sharing schemes and selected features of their respective schemes. Each scheme was described in detail and the financial mechanisms explored, as were the incentives provided by the schemes, and the level of responsibility their respective stakeholders held. Selected experts of the cost-sharing schemes and the responsible national authority completed survey questionnaires that went into further detail on the financial and contractual elements of such schemes (e.g., institutional set-up, costs covered, contribution and compensation payments, obligations of operators). These surveys were supplemented with interviews. The results of the case studies were considered in the economic analysis of different options.

2.3. Interviews/meetings with key partners and stakeholders

The pre-feasibility study began with several meetings during the inception phase in order to focus on the necessary arguments; meetings were initially conducted with:

- A working group¹⁰ during the Informal Meeting of CVOs in Edinburgh on 7 September 2005.
- A subsequent meeting took place at DG SANCO on 23 September 2005 with the participation of European organisations of insurers (CEA and AISAM), the perspective of the European insurance industry on cost-sharing schemes was discussed and possibilities for cooperation during the evaluation study were explored. This meeting was followed by a second meeting with the agricultural risks committee of the CEA in Paris on 24 November 2005.

In the next phase, extensive dialogue was conducted with stakeholders and experts, especially with experts from the three MS selected for case-studies. The aim of these interviews and meetings was to analyse the schemes and to determine best-practices for harmonized cost-sharing schemes. The interviews on cost-sharing schemes were conducted as face-to-face interviews or phone interviews. Experts selected for interviews mostly completed an in-depth questionnaire before the interview and the interviews were mainly intended to clarify and provide additional information on selected aspects.

2.3.1. At EU level

Table 2: Interviews/meeting with European representatives

	Organisation	Details
1	CEA / AISAM	Comité Européen des Assurances (two meetings) / Association Internationale des Sociétés d'Assurance Mutuelle
2	DG AGRI	Directorate-General for Agriculture and Rural Development (two meetings)
3	Expert Workshop	The workshop brought together experts from insurers, stakeholder organisations, cost-sharing schemes, the Commission, the European Parliament and the evaluation team

¹⁰ GROUP E – Finance, including rationale for Community Animal Health Policy and priorities for EU spending

2.3.2. At MS level

Table 3: Interviews/meeting with national representatives

	Organisation	Details
1	DEFRA	Department for Environment, Food and Rural Affairs (two meetings)
2	GDV and two insurers	Gesamtverband der Deutschen Versicherungswirtschaft (German Insurance Association) and two insurers (Uelzener Versicherung and Vereinigte Hagelversicherung)
3	Tierseuchenkassen	Tierseuchenkasse Bayern and Nordrhein-Westfalen
4	Bundesländer	Länder der Bundesrepublik Deutschland (Representatives of all federal states of the Federal Republic of Germany)
5	Tierseuchenkassen	Tierseuchenkassen of federal states of the Federal Republic of Germany
6	Ministerie van LNV	Ministerie van Landbouw, Natuur en Voedselkwaliteit (Dutch Ministry of Agriculture, Nature and Food Quality)
7	OVM Avipol BA	Onderlinge Verzekerings Maatschappij (Mutual Insurance Company) Avipol B.A.
8	Product Boards for Livestock, Meat and Eggs (PVE)	Governing body of the Animal Health Funds, the Netherlands
9	LTO Nederland	Land- en Tuinbouw Organisatie Nederland (Dutch Organisation for Agriculture and Horticulture)
10	Agroseguro	La Agrupación Española de los Seguros Agrarios Combinados (The Spanish Grouping of the Combined Agrarian Insurances)
11	ENESA	Entidad Estatal de Seguros Agrarios, (The State Organization for Agricultural Insurances)
12	Ministry of Agriculture	Subdirección General de Sanidad Animal, Ministerio de Agricultura, Pesca y Alimentación

2.4. Analysis

The theoretical background of the analysis of government and individual responsibilities regarding prevention and control of epidemic livestock diseases is the theory of externalities, which is a possible source of inefficient market outcomes. As soon as externalities in decisions of market participants are detected, one can examine if public involvement can help improve the market outcome, i.e. mitigating inefficiency or, rather technically speaking, internalising externalities. The analysis regarding the insurance function of a cost-sharing scheme, i.e. the discussion about incentive compatibility, emerges from models of insurance economics. The dominant structure of these models is a principal-agent relationship between a risk-ceding agent, which is a farmer or other operator in the context of this study, and a risk-taking principal, which could be a private insurer, a public fund, etc. The implications of the models that are referred to are empirically tested and approved in many different insurance relationships. Empirical work on economic models based on data of the livestock industry is rare, however. Key thoughts and implications are illustrated with examples from the livestock production industry. As elements and conditions of a cost-sharing scheme are often interrelated, the

analysis is divided into single, separately analysed aspects. This approach is called partial analysis. It is a common approach in economics to reduce complexity of the analysis. Whenever important relations are missed out in a partial approach, the implications of the partial analysis are being examined in a comprehensive view.

Initial results of the analysis were summarised in a working paper (see Annex 3) and presented in an expert workshop on options for harmonised cost-sharing schemes for epidemic livestock diseases that took place in Brussels on 17 March 2005. Participants and stakeholders were then given the opportunity to respond in writing to the working paper. Fourteen comments were received from the following organisations (see Annex 4):

- AVEC – Association of Poultry Processors and Poultry Trade in the EU Countries
- CEA – Comité Européen des Assurances
- Copa Cogeca
- DG SANCO (two statements)
- FESASS – European Federation for Animal Health and Sanitary Security
- UECEV – European Livestock and Meat Trading Union
- Ministry of Agriculture, Nature and Food Quality (Netherlands)
- Gesamtverband der Deutschen Versicherungswirtschaft (Germany)
- Federal Ministry of Food, Agriculture and Consumer Protection (Germany)
- Niedersächsische Tierseuchenkasse (Germany)
- Agroseguro (Spain)
- Ministry of Health (Italy)
- JIGWG – Joint Industry/Government Working Group on sharing responsibilities and costs for animal diseases (Secretariat England, UK)

The detailed and very helpful comments were analysed in depth by the evaluation team and have been taken into account while preparing this final report.

3. Current Community financing of epidemic livestock diseases

3.1. Community financing of veterinary emergency measures

Community measures related to outbreaks of epidemic livestock diseases are currently funded under budget lines from both DG SANCO and DG AGRI with different procedures involved; these can include co-financing of veterinary emergency measures such as the slaughter of animals (direct losses) and exceptional market support measures that provide support to farmers/breeders affected by restrictions imposed by the veterinary authorities (consequential losses).

Expenditure in the veterinary field is financed by EAGGF (Guarantee Section) funds¹¹. The “Veterinary Fund”¹² is administered by DG SANCO and refers to the funding of veterinary emergency measures allocated under budget line 17.0403 (as of 2004) entitled “emergency fund for veterinary complaints and other animal contaminations which are a risk to public health.” Council Decision 90/424/EEC of 26 June 1990 on expenditure in the veterinary field brings together all Community financial measures for the eradication, control and monitoring of animal diseases and zoonoses. It lays down the relevant procedures governing the Community's financial contribution. Co-financing is foreseen in the event of an epidemic livestock disease; typically the MS in which the disease outbreak occurred submits a claim and the Commission then determines the actual reimbursement according to the eligibility criteria in place. Council Decision 90/424/EEC allows for co-financing 50 percent of the costs of compulsory and pre-emptive slaughter and of related operational expenditure (60% for Foot-and-Mouth Disease). The cost categories that are eligible for co-financing have recently been specified in more detail in Regulation 349/2005. They include:

- Costs of compensation to owners the market value of compulsory slaughtered animals or destroyed eggs, with maximum eligible compensation per animal;
- Costs associated with the compulsory slaughter of animals: (1) salaries and remunerations of personnel specifically employed for the slaughtering operation; (2) consumables and specific equipment use for the slaughtering operation; and (3) purchases of services or hire of means of transport to take animals to the slaughtering location;
- Costs associated with the destruction of carcasses and/or eggs: (1) rendering: purchases of services or hire of means of transport to take carcasses and/or eggs to the rendering plant, processing of carcasses and/or eggs at the rendering plant, consumables and specific equipment used for the destruction of eggs, and destruction of meal; (2) burial: personnel specifically employed, purchases of services or hire of means of transport and equipment for burying carcasses and/or eggs, and products used to disinfect the holding; and (3) incineration (where applicable on the spot): personnel specifically employed, fuel or other materials used, purchases of services or hire of means of transport for carcasses and/or eggs, and products used to disinfect the holding;

¹¹ Council Regulation (EC) No 1258/1999 of 17 May 1999, in particular Article 1, paragraph 2d

¹² We will refer in the following sections to the “Veterinary Fund”, although technically speaking, the “Veterinary Fund” is not an actual fund but a summation of budget line 17.0403

- Costs associated with cleaning, disinfecting, and disinsectisation of holdings: (1) products used for such activities; and (2) salaries and remunerations of personnel specifically employed;
- Costs associated with the destruction of contaminated feedingstuffs and/or milk: (1) reimbursement of purchase price such products; and (2) purchases of services or hire of means of transport and equipment for the destruction of such products;
- Costs associated with the destruction of contaminated equipment, at market value;
- In connection with vaccination, eligible expenditure may cover the salaries and fees of personnel specifically recruited, consumables and specific equipment used for vaccination and, where applicable, the purchase of the necessary vaccines for disease eradication by the MS where the Community is not in a position to supply them.¹³

In the case of serious market disturbances due to restrictions imposed by the veterinary authorities in the case of outbreaks of animal diseases like FMD or CSF, exceptional market support measures can be introduced by the Commission in order to support the farmers affected by these restrictions. Exceptional market support measures are implemented under the authority of DG AGRI.¹⁴ Such measures can only be introduced, once MS have introduced the veterinary measures necessary to stamp out epizootic diseases, “only to the extent and for the duration strictly necessary to support the market concerned.”¹⁵ The aim of these measures is to purchase and remove healthy livestock in order to avoid overcrowding on farms located in protection and surveillance zones which threaten a serious disturbance of livestock markets. The measures were fully financed by the Commission until 1992 when national co-financing of exceptional market support was first introduced for CSF outbreaks. Following that, in 1994, the Commission introduced a 70% co-financing by the Community for a maximum number of animals, which was used e.g. during the CSF outbreak. In 2005, the Commission specified a 50% national co-financing rate (60% for FMD) in the relevant legal bases. These measures support only the farms which are directly affected by health and veterinary measures.

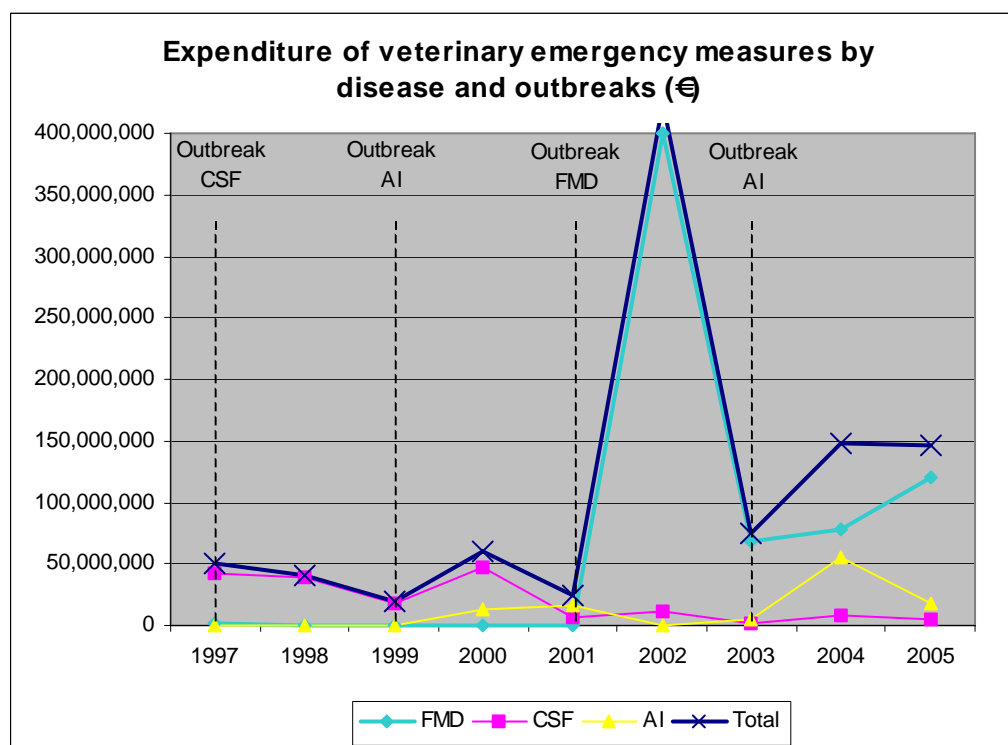
Within the framework of this evaluation, a main focus is on the appropriateness of the financial instrument (Decision 90/424/EEC) which ensures that Member States properly implement the Community Animal Health Policy (*criteria d* of Evaluation Question 10). Payments by the “Veterinary Fund” increased significantly since it was originally launched in 1990 and have fluctuated depending on major disease outbreaks as can be seen in the following graph:

¹³ Regulation (EC) No. 349/2005

¹⁴ Relevant regulations: (EEC) No. 2759/75, (EEC) No.2771/75, (EEC) No. 2777/75, (EC) No. 1254/1999, (EC) No. 1255/1999, (EC) No. 2529/2001

¹⁵ Relevant to all regulations

Figure 1: Veterinary emergency expenditure by disease per year 1997-2005 (excluding market support and other ad-hoc measures)



Source: DG SANCO, actual annual expenditure

The graph above indicates that actual payments of funds from the “Veterinary Fund” have increased overall since 1997¹⁶. There was an increase in 2002 due to refunds to MS for their losses suffered by the FMD outbreak in 2001, specifically in the UK, Netherlands, Ireland, and France. When interpreting the peak in 2002 of expenditures under Decision 90/424/EEC it has to be taken into account that prior to this date exceptional market support measures were more often used to cover disease outbreak losses (e.g. during the CSF outbreak in 1997 totalling more than 500 million ECU, see below). In contrast, during the FMD outbreak in 2001 no exceptional market support measures were implemented.

Reimbursement of costs related to the FMD outbreak in 2001 and the outbreak of AI in 2003 has kept payments from the “Veterinary Fund” at nearly 150 million Euro per year in 2004 and 2005. Payments allocated for major diseases by year can be seen in the table below:

¹⁶ Detailed data concerning the expenditures for 1995 and 1996 was not available

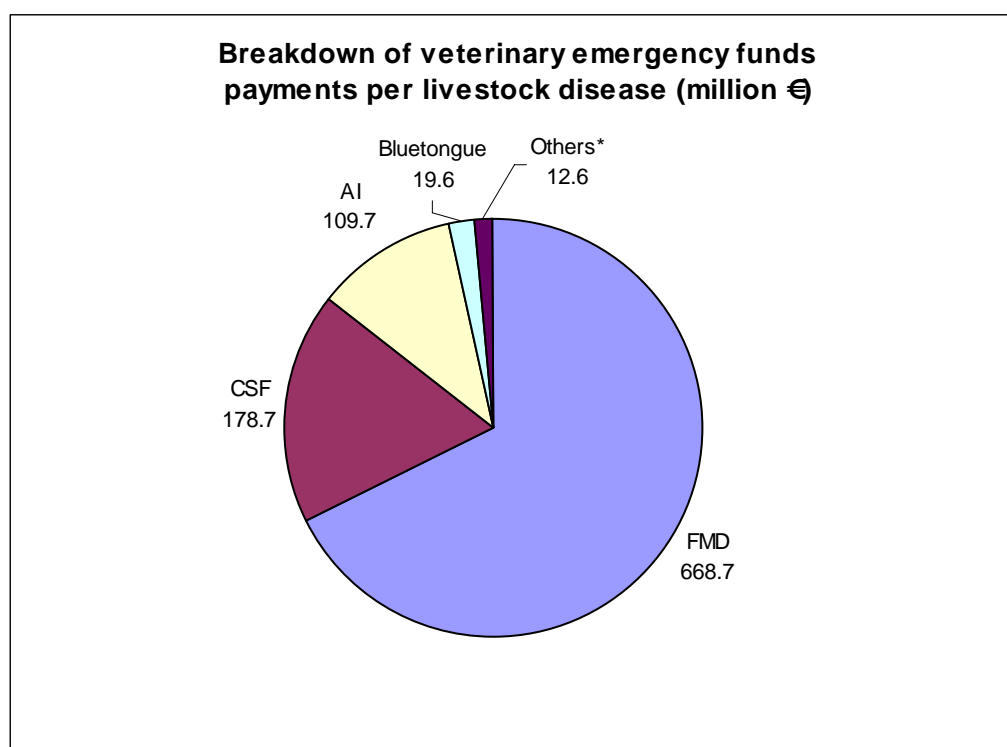
Table 4: “Veterinary Fund” expenditures by year and major disease (in €)

Year	CSF	FMD	AI	Other diseases	Total
1995	No data	No data	No data	No data	34,480,000
1996	No data	No data	No data	No data	2,350,000
1997	42,548,958	1,750,000	0	5,503,199	49,802,157
1998	38,523,284	0	0	2,476,715	40,999,999
1999	18,077,535	0	0	2,107,465	20,184,999
2000	47,053,494	0	13,790,015	0	60,843,509
2001	6,279,224	0	17,001,072	731,147	24,011,443
2002	11,418,920	400,448,883	0	12,456,105	424,323,908
2003	1,782,493	67,821,327	4,763,797	469,419	74,837,036
2004	8,923,019	78,733,804	55,916,517	5,137,362	148,710,703
2005	4,159,354	119,961,100	18,227,041	3,297,091	145,644,586
TOTAL costs	178,766,281	668,715,114	109,698,442	32,178,503	1,026,188,340

Source: 1995-1996: actual expenditure for commitment appropriations; 1997-2005: DG SANCO, actual annual expenditure

Total expenditures of the “Veterinary Fund” in the period 1997 to 2005 by disease are given in the following graph:

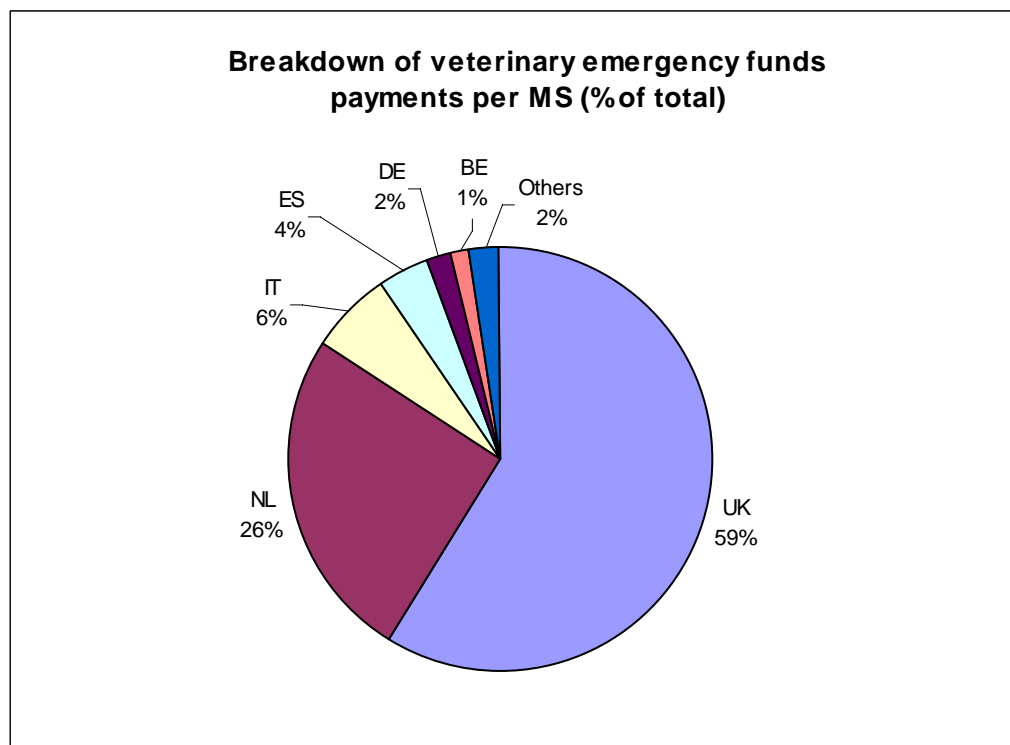
Figure 2: “Veterinary Fund” expenditure per disease (1997-2005)



* Others: Newcastle disease, Swine vesicular disease, Sheep pox, Rage
 Source: DG SANCO, actual annual expenditure

A significant percentage of the “Veterinary Fund” has been allocated to the FMD outbreak. This is also illustrated by the MS’ that benefited most from allocations:

Figure 3: “Veterinary Fund” expenditure per MS (1997-2005)



Source: DG SANCO, actual annual expenditure

The graph above illustrates that 59% of total “Veterinary Fund” expenditures in the period 1997 to 2005 were used for co-financing emergency measures in the UK; this is due to the fact that the UK was hit hardest by the FMD outbreak in 2001 and suffered the most direct losses. The FMD crisis amounts to 98% of the losses compensated by the “Veterinary Fund” to the UK from 1997-2005.

3.2. Total costs of major disease outbreaks and Community co-financing

Following an outbreak of an epidemic livestock disease, costs may accrue to the government, agricultural stakeholders (mainly breeders/farmers and traders) as well as to other sectors of the economy (e.g. tourism). The following section provides estimates of total costs of the three major outbreaks of livestock diseases: Classical Swine Fever (CSF) in the Netherlands in 1997; Foot-and-Mouth Disease (FMD) in the UK in 2001; and Avian Influenza (AI) in the Netherlands in 2003. Data was collected concerning accumulated costs and categorized in order to permit an analysis of total costs and losses. Finally, for each outbreak an overview is given on Community co-financing, focusing on expenditures from the “Veterinary Fund” and exceptional market support measures.¹⁷

¹⁷ The costs of the BSE crisis were not included in the analysis because of its atypical characteristics. The total BSE expenditure was significantly higher than the total Community expenditure related to all other livestock disease outbreaks in the evaluation period, totalling 7,187.2 million Euro between 1996 and 2005, including 1,801.1 million Euro for total expenditure on public intervention related to beef meat (total expenditure on public intervention has been taken into account,

3.2.1. Types of losses considered

Costs directly and indirectly accruing to the economy following an outbreak of an epidemic livestock disease can be categorized and defined as follows:

Disease outbreak losses: Losses accruing to the government and farmers/breeders directly caused by restrictions imposed by veterinary authorities; such measures include: (1) stamping-out of infected herds; (2) pre-emptive slaughter of contact herds, welfare slaughter; (3) partial loss of animal value due to control measures like compulsory emergency vaccination or moving or marketing restriction causing exceeded maturity for slaughter; (4) costs of slaughter and rendering, disinfection and other direct disease control costs; and (5) business interruption costs and additional expenses directly related to established restriction zones.

Also included can be *price risks*: partial loss in animal value due to price decreases on markets caused by disease outbreaks and/or higher replacement costs.

Losses other sectors: Costs indirectly accrued to related industries that also experience effects from a disease outbreak; e.g.: slaughterhouses, animal traders, feed suppliers, breeding organizations, auctions markets, and processors. In some cases, costs amassed to tourism industries are also included.

Being that no common categorization exists for classifying losses from epidemic livestock diseases, the categorization of costs of livestock diseases below adheres to its source data. It has been re-categorised into the previously defined categories in the pie charts for comparison purposes.

3.2.2. Classical Swine Fever – The Netherlands, 1997-1998

The first case of CSF was detected in 1997 and the epidemic lasted 18 months.¹⁸ In total it affected 429 farms and more than 60 % (i.e., 13,000) of Dutch swine farms were affected by at least one control measure.¹⁹ The disease mainly became widespread because it went undetected on Dutch farms for over a month. The Netherlands pursued a number of control policies that resulted in 11 million animals slaughtered; the vast majority of the animals were slaughtered for welfare reasons (9.2 million) while the rest were pre-emptive slaughter (1.1 million) and slaughter of infected animals (0.7 million).²⁰ The control policies implemented by the Dutch government included: stamping-out of infected herds; a movement standstill in areas around infected herds; pre-emptive slaughter of contact herds; pre-emptive slaughter of herds within a 1 km radius of infected herds; welfare slaughter; and a breeding prohibition.

as it is not possible to distinguish between total intervention and intervention due to the BSE crisis). Source: DG Agri

¹⁸ UN FAO (2002). *Intergovernmental Group on Meat and Dairy Products*. Retrieved from <http://www.fao.org/DOCREP/MEETING/004/Y6975E.HTM>

¹⁹ Meuwissen, M.P.M., Horst, S.H., Hurine, R.B.M. (1999). A model to estimate the financial consequences of classical swine fever outbreaks: principles and outcomes. *Preventive Veterinary Medicine*, 42, 249-270

²⁰ UN FAO

According to Meuwissen et al., the total cost of the CSF epidemic from 1997-1998 was 2,339 million USD (see Table 5). The FAO estimates that the outbreak of CSF in the Netherlands between 1997 and 1998 resulted in a 0.75 % drop in actual GDP.²¹

Table 5: Cost break-down for the CSF crisis in the Netherlands, 1997-1998

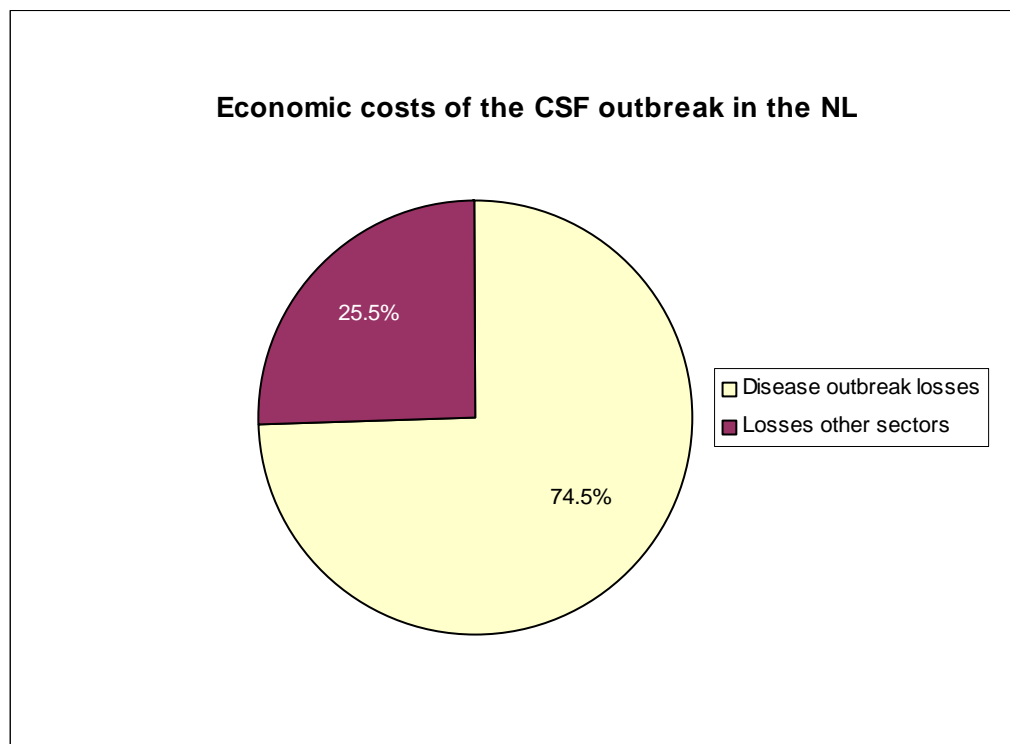
Categories	Costs (million USD)	Costs (million €)*
Disease outbreak losses		
Costs of organization	138	118
Stamping-out of infected herds	104	89
Pre-emptive slaughter and welfare slaughter	1,036	885
Breeding prohibition	42	36
Idle production factors; supply and delivery problems; losses from repopulation	423	361
Sub-total disease outbreak losses	1,743	1,489
Losses other sectors		
Slaughterhouses; animal traders; feed suppliers; breeding organizations	596	509
Sub-total losses other sectors	596	509
TOTAL costs	2,339	1,998

* Annualised exchange rate (1998): 1 USD= 0.854 €ECU
 Source: Meuwissen et. al. (1999)

According to our categorization of costs, the costs of CSF to the Netherlands in 1997-1998 can be broken into the following components:

²¹ UN FAO

Figure 4: Loss categorisation for the CSF outbreak in the Netherlands (1997-1998)



Source: based on Meuwissen et. al. (1999)

Community contributions: The Netherlands submitted a claim for 402 million ECU as eligible for the 50% co-financing measure for the whole amount of losses in 1997. The Netherlands received 63.4 million ECU between 1997-1998. Reasons for this low compensation rate are the 6 % deduction by the Commission for VAT (ineligible) and a flat-rate deduction of 25 % (some ECU 20 million). The 25 % penalty was based on the failure to apply Community measures concerning expenditure in the veterinary field during the crisis. Complete data up to 31 Dec 2005 totals actual expenditure from the “Veterinary Fund” for the NL related to the outbreak at 116.2 million €²² The EU paid a total of 80.5 million ECU from the “Veterinary Fund” (then budget line B2-5 1 06) and an additional 570 million ECU was spent for exceptional market support measures to the Member States affected by CSF between 1997-1998; in total, 651.3 million ECU was spent between 1998-1999 by the EU to Member States including exceptional market support to farmers affected by the outbreak of CSF in Europe.²³

3.2.3. Foot-and-Mouth Disease – United Kingdom, 2001

The first case of FMD was detected in the UK in 2001 and the epidemic lasted for 7.5 months. In total, there were 2,033 recorded outbreaks. As with the CSF outbreak in the Netherlands, this disease was widespread before it was detected in the UK; at least 57 farms had already been infected.²⁴ The

²² Source: DG SANCO, actual annual expenditure of “Veterinary Fund” 1997-2005

²³ Court of Auditors: European Union (2000). *SPECIAL REPORT No 1/2000 on classical swine fever, together with the Commission’s replies*. (Official Journal C85). P.14

²⁴ National Audit Office. (2002). *The 2001 Outbreak of Foot and Mouth Disease*. London: The Stationary Office, p. 1

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disease eventually also spread to 3 other European countries. To combat the disease, the British government primarily followed a stamping-out control policy, which resulted in the slaughter of 9.83 million animals; of this number, 1.3 million animals were slaughtered because they were infected, 3.1 million animals were slaughtered preemptively, and 5.43 million animals were slaughtered for welfare reasons. Additional control measures were a national movement ban and closure of livestock markets. According to the UK National Audit Office (NAO), the total cost of the FMD epidemic in 2001 was 8,540 million GBP or 13,594 million €(see Table 6 below).

Table 6: Cost break-down for the FMD crisis in the UK, 2001

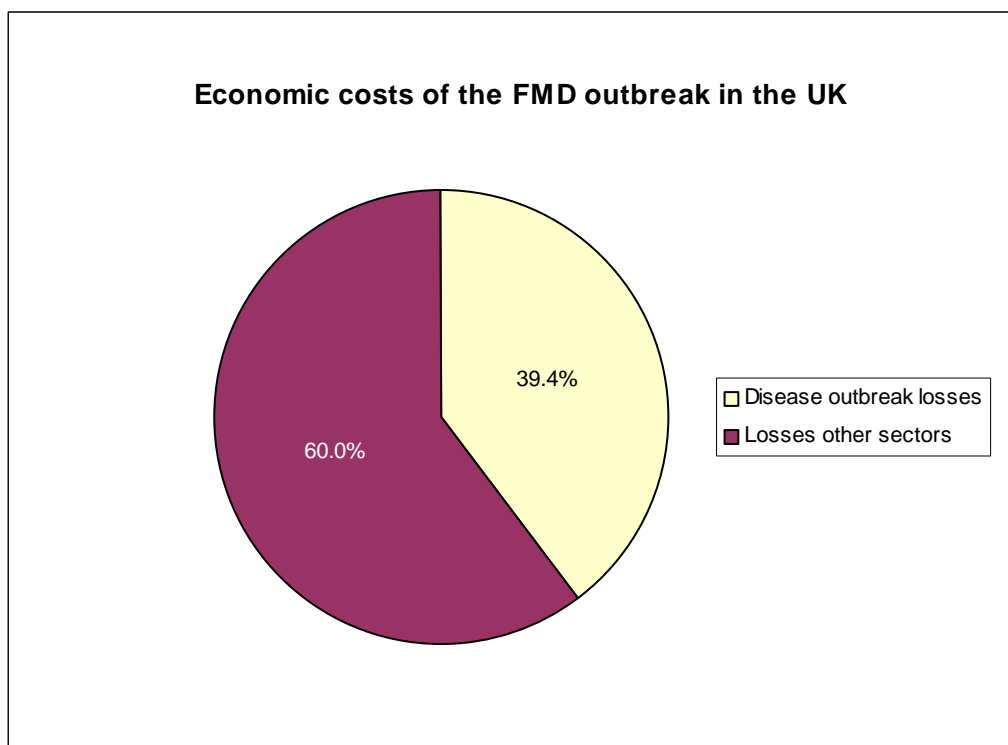
Categories	Costs (million GBP)	Costs (million €)*
Disease outbreak losses		
Compensation paid to farmers for animals culled or items seized or destroyed	1,158	1,843
Payments to farmers for animals slaughtered for welfare reasons	211	336
Haulage, disposal and additional building work	375	597
Cleansing and disinfecting	304	484
Extra human resource costs	236	376
Administration of the Livestock Welfare Disposal Scheme, including operating costs, disposal charges and slaughter fees	164	261
Payments to other Government departments, local authorities, agencies and others	89	142
Miscellaneous, including serology, slaughtermen, valuers, equipment and vaccine	81	129
Claims against the Department	30	48
Cost of the Department's and other government departments' staff time	100	159
Support measures for businesses affected by the outbreak	282	449
Losses agricultural producers	355	565
Sub-total disease outbreak losses	3,385	5,389
Losses other sectors		
Losses food industry (auction markets, abattoirs, processors, and hauliers)	170	271
Indirect impact on the agricultural supply sector	85	135
Losses to tourism industry	4,900	7,799
Sub-total losses other sectors	5,155	8,205
TOTAL costs	8,540	13,594

* Annualised exchange rate (2002): 1 GBP= 1.592 € Source: NAO

The FAO estimates that the outbreak of FMD in the UK in 2001 resulted in a 0.2 % drop in actual GDP.²⁵ This estimate is relatively low because the large costs suffered in the tourism and leisure industries (estimated to be 4,900 million GBP) were offset by delayed consumer spending or increased spending in other sectors of the British economy. Direct compensation to farmers was paid to over 6,800 individual farmers.²⁶

The costs of FMD to the UK in 2001 can be broken down into the following components:

Figure 5: Loss categorisation for the FMD outbreak in the UK (2001)



Source: Figures from NAO

Community contributions: The UK government submitted an individual claim of 998 million GBP (1,588 million €) to the Commission for compensation²⁷; in return, the UK received 571.0 million € from the “Veterinary Fund” that were accepted as eligible costs.²⁸

Overall, for the 2001 crisis alone the total expenditure declared by all affected Member States (France, Ireland, Netherlands, and the UK) for compensation for slaughter and destruction of animals as well as disinfecting of farms and equipment was about 2,693.4 million € of which 1,616 million € was

²⁵ UN FAO

²⁶ NAO pg. 83

²⁷ NAO pg. 21

²⁸ DG SANCO, actual annual expenditure up to 31 Dec 2005

claimed for Community reimbursement.²⁹ Following the decision to reimburse losses related to the FMD crisis of 2001, the EU paid a total of 664.4 million € to Member States from the EU “Veterinary Fund” (then budget line B1 3320)³⁰. No exceptional market support measures have been implemented with respect to the FMD crises.

3.2.4. Avian influenza – The Netherlands, 2003

The outbreak of AI in the Netherlands was detected in 2003 and then spread to Belgium and Germany. This led to the slaughter of 30.7 million birds (about 28 % of the total poultry population in the Netherlands) and consequently, heavy losses for the poultry sector.³¹ The Dutch government implemented a policy of compulsory slaughter, movement standstill of live poultry, pre-emptive slaughter of farms near the Belgium boarder; pre-emptive slaughter of poultry within a 3 km radius of suspicious areas and turkeys within a 10 km radius. 255 flocks were infected and poultry was culled on 1,242 farms and 8,397 backyard flocks.³²

According to a 2005 Commission report, the total cost of the AI epidemic to the Netherlands in 2003 was 505.5 million € (see table below).

Table 7: Cost break-down for the AI crisis in the Netherlands, 2003

Categories	Costs (mil €)
Disease outbreak losses	
Direct eradication costs (compensation for birds killed and destroyed, cleansing and disinfection, etc.)	155.5
Estimate of the losses incurred by farmers and industry (losses from restrictions imposed on movement of poultry, marketing of their products and other negative impacts for the poultry sector)	350
TOTAL costs	505.5

Source: SEC (2005) 549

Accordingly, the costs of AI to the Netherlands in 2003 can be broken into the following components:

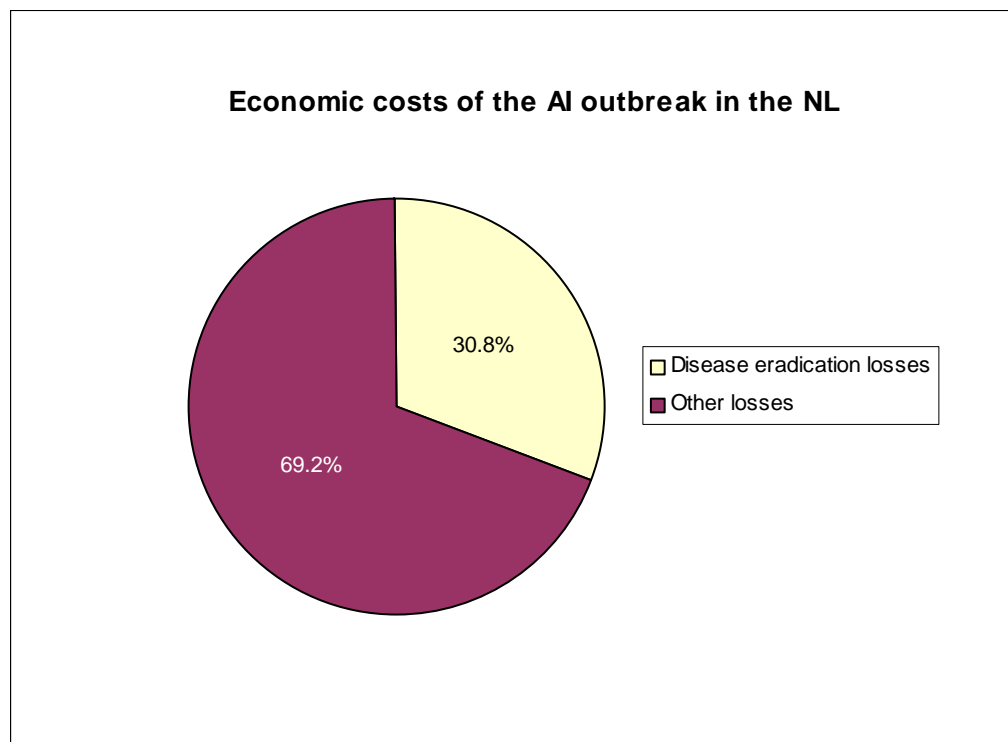
²⁹ Court of Auditors: European Union (2004). *SPECIAL REPORT No 8/2004 on the Commission’s management and supervision of the measures to control foot-and-mouth disease and of the related expenditure, together with the Commission’s replies.* (Official Journal C54). P.5

³⁰ DG SANCO, actual annual expenditure up to 31 Dec 2005

³¹ SEC (2005) 549. *Commission staff working document, Annex to the new Community measures for the control of Avian Influenza, in accordance with the draft Commission proposals for a new Council Directive on the control of Avian Influenza and for a Council Decision amending Council Decision 90/424/EEC as regards Community compensation for Avian Influenza control measures, Impact Assessment.* pg. 21

³² DG SANCO (2003). *Avian Influenza (AI) in the Netherlands, Belgium, and Germany.* EU Online. Retrieved April 11, 2006, from http://europa.eu.int/comm/food/fs/ah_pcad/ah_pcad_77_en.pdf p. 11

Figure 6: Loss categorisation for the AI outbreak in the Netherlands (2003)



Source: Figures from COM (2005) 171 SEC (2005) 549

Community contributions: For the 2003 AI outbreak in the EU (in BE, DE, and NL), the total declared losses was 173.9 million € of which 86.0 million € was claimed for Community reimbursement (under 50 % co-financing). Of this amount, the Netherlands' government estimated losses of 155.5 million and submitted a claim for 77.7 million € under the 50 % co-financing measure of the EU; of which the EU compensated 56.6 million € to the Netherlands³³ from the "Veterinary Fund". An additional amount of 4 million Euro related to the crises was appropriated from other budget lines.³⁴

3.3. Appropriateness of the financial instrument

Appropriateness of the financial instrument (Council Decision 90/424/EEC) with respect to veterinary emergency measures can be assessed at different levels, including the appropriateness in terms of Community funds available, the procedures involved in co-financing and the extent to which the instrument ensures that Member States properly implement the Community Animal Health Policy.

Expenditures under the financial instrument (Council Decision 90/424/EEC) are generally reimbursed ex-post, i.e. on the basis of eligible MS expenditures. There is no upper limit for Community co-financing foreseen, all eligible costs claimed by the Member States have to be reimbursed. Therefore, a significant part of the direct losses of livestock diseases are currently covered by the Community,

³³ DG SANCO, actual annual expenditure up to 31 Dec 2005

³⁴ DG AGRI

implying a risk for the Community budget that has at various times been criticised by the Court of Auditors³⁵. However, due to the flexibility of the financial mechanism in place for the “Veterinary Fund” during the evaluation period Community commitments under the Decision were generally fulfilled, no measures to limit Community co-financing had to be introduced. This indicates that the financial instrument was appropriate (*criteria d*) as far as this relates to the general availability of Community funds for the co-financing of veterinary emergency measures. This is also reflected in the results of the survey conducted in the framework of this evaluation: In general, a large majority of the respondents (89%) that had an opinion on the issue were assessing that the available funds available for addressing the needs of the Community Animal Health Policy were partly (52%) or fully (37%) appropriate³⁶.

Problems however, were encountered with respect to the procedures involved that in some cases led to a significant time lag between the occurrence of the outbreak and the actual reimbursement of Community funds to the affected MS. As is illustrated in Figure 1 above, usually payments from the “Veterinary Fund” related to a specific disease outbreak culminated in the year after the end of the epidemic. However, while in some cases payments were already executed in the first year of the outbreak, in other cases payments related to an outbreak were delayed by up to five years. These delays were partly caused by a lack of clarity of compensation rules and the existence of “grey areas”, e.g. between veterinary and market support slaughtering, that led in some cases identified by the Court of Auditors in its reports on the CSF epidemic 1997/98 to double payments and compensation payments at rates that were significantly higher than the actual market price of the affected animals. In its report on the FMD epidemic in 2001 the Court pointed to the “absence of any framework for compensation” and stated: “[This] made possible the inconsistencies and inequalities of treatment meted out to farmers according to their geographical location and/or the slaughter method chosen. (...) The compensation for direct losses by farmers, i.e. the gross value of slaughtered livestock, was not set in advance (except in the Netherlands). This meant that Member States had to set it during the crisis, when some price references were unavailable because markets were closed. (...) As regards indirect losses there was no compensation in three Member States (Ireland, Netherlands, United Kingdom), leaving farmers without resources for at least three weeks after animals had been slaughtered, while the farm was being decontaminated. In France, on the other hand, the losses were reimbursed to farmers by the French authorities, who considered that the expression ‘adequate compensation’ for farmers ought to cover all losses (animals and income). However, the Commission did not accept them for reimbursement. (...) In the absence of detailed Community regulations the systems introduced in the Member States resulted in lack of uniformity in the compensation to farmers.”³⁷ A detailed clarification of the Community co-financing framework for veterinary measures was finally created with Regulation 349/2005, which also introduced strict sanctions for Member States that did not provide a “swift and adequate compensation”, another example for disputed interpretation of the wording of Council Decision 90/424/EEC. In Regulation 349/2005 it was specified that this meant “payment, within 90 days of the slaughter of the animals, of compensation corresponding to the market value of the animals”. It can therefore be concluded that during the evaluation period the financial instrument (Council Decision 90/424/EEC) was only partly appropriate

³⁵ Court of Auditors *SPECIAL REPORT No 1/2000* on classical swine fever, Court of Auditors, *SPECIAL REPORT No 8/2004* on FMD. In the Report on FMD the court listed as factors contributing to a risk for the Community budget that Community legislation does not include incentives to encourage farmers to participate actively in prevention and control and farmers do not make a direct contribution to the Community funding for prevention and control arrangements. It also criticised the funding system, that has, however, been revised with Regulation 349/2005.

³⁶ However, only 27 respondents had an opinion on this issue, with a similarly high number marking “Don’t know”

³⁷ Court of Auditors, *SPECIAL REPORT No 8/2004*

concerning the clarity of compensation rules and the procedures involved. Significant progress has been made at the end of the evaluation period with creating a clearer legislative framework. However, the interviews conducted during the evaluation indicated that several problems may remain:

- The new framework is perceived by some Member States as being overly bureaucratic, especially concerning the administrative details of the reporting requirements;
- Although compensation ceilings for the animal value have been set to a certain extent, this is not the case with respect to other measures eligible for compensation, e.g. costs of slaughtering, destruction of animals, disinfection. According to Commission data, the share of this type of costs in the total costs reimbursed is rapidly increasing, pointing to a possible need to clarify rules also in this respect, e.g. by the introduction of flat rates etc.

3.4. Incentives provided

To analyse the degree to which (expected) compensation payments in the case of epidemic livestock disease outbreaks under the financial instruments in place have provided incentives for disease transmission prevention (before the outbreak), it is necessary to recall how the burden of past outbreaks was shared. The overview of losses from major disease outbreaks given in the previous sections illustrates that losses in the evaluation period were determined by a low number of livestock epidemics of catastrophic character that account for a majority of the total losses. Outbreaks of livestock disease other than the three major outbreaks described above only account for a low percentage of expenditures from the “Veterinary Fund”. The high impact of the major outbreaks is also reflected in the fact that most expenditures were used for the co-financing of measures in only two MS, namely the UK and the Netherlands. Both countries have a large livestock industry and were heaviest hit by disease outbreaks during the evaluation period. The loss-dependent Community contributions therefore provided a financial support to MS/regions that can be considered, at least in the evaluation period, a high-risk area. No similar co-financing was given for prevention measures, meaning in effect that MS/regions that either have a lower risk of livestock diseases due to their production structure and/or take appropriate prevention measures have received little financial resources from the Community. This may distort competition (*criteria b*) and may lead to a continuation of unsustainable production structures. Loss-dependent Community co-financing may have been an important incentive for MS to take effective and rapid veterinary control measures. However, this system cannot be considered to provide incentives for prevention. Of course, the responsibility of a MS government for public and animal health is in itself the most relevant incentive for governments to be involved in prevention, as well as the fact that the MS carry most of the burden of outbreaks. However, no additional incentive for prevention was provided by Community financing rules.

The same has to be stated with respect to the incentives provided to farmers receiving or expecting to receive compensation in case of an outbreak. The Court of Auditors describes in its reports several examples that may illustrate this:

- A group of holdings that were held by the Commission responsible to a large extent for the spread of CSF in Spain experienced five outbreaks and 13 preventive slaughter operations and received a total of ECU 9.2 million from Community funds.³⁸
- With respect to the FMD outbreak the Court reports that in the United Kingdom and France farmers who did not notify the disease or respect the animal movement restrictions were entitled to full compensation because the payment of compensation was not conditional on compliance with essential aspects of the control provisions, such as disease notification and observance of movement restrictions.³⁹

In the meantime, Community regulations have adapted and now require Member States to put in place penalties for non-compliance with the national rules implementing Community directives, and Regulation 349/2005 has clarified a number of compensation related issues. However, Community legislation currently does still not provide significant financial incentives to encourage farmers to participate actively in prevention and control, as the Court of Auditors already noted in its report on the FMD outbreak.⁴⁰

Again, it has to be pointed out that farmers and other operators in the livestock industry have, of course, a strong interest in preventing animal diseases. It is an element of good agricultural practices to implement a certain level of prevention measures, and the data presented in the previous sections indicates that the agricultural sector carries a very significant part of the costs of catastrophic disease outbreaks, if one takes into account costs of business interruption and other consequential losses. However, existing financial instruments did not provide additional incentives for disease transmission prevention (*criteria f*), especially with respect to prevention measures that are not a minimum standard required by legislation. Additionally, some aspects of Community funding may even have provided adverse incentives:

- The focus on the compensation of direct losses may have led to a situation that in some cases an operator with an infected herd could be better off than a farmer with a healthy herd that is located in a restriction zone for a longer period. This type of compensation system does not provide additional incentives to prevent a herd from contracting a disease that broke out nearby. But efficient control of disease outbreaks requires categorical support of all operators, which is much easier to obtain when it is clearly in their economic interest to prevent a further spread of the disease (see section 5.5.2 below).
- Compensation for indirect losses was provided in some cases under exceptional market support measures. This may have reduced some adverse incentives. However, exceptional market support measures are negotiated ex-post and it is very difficult for farmers to engage in proper planning for risk management in case of livestock disease, when compensation rules are not clear beforehand.

³⁸ Court of Auditors *SPECIAL REPORT No 1/2000*

³⁹ Court of Auditors, *SPECIAL REPORT No 8/2004*

⁴⁰ Court of Auditors, *SPECIAL REPORT No 8/2004*

3.5. Conclusions

The system of EU financing of major disease outbreaks was during the evaluation period a mixture of ad-hoc compensation through exceptional market support measures and a loss-based compensation defined in Council Decision 90/424/EEC. The analysis conducted in this section indicates that the financing of livestock disease losses through ad-hoc measures in case of an outbreak does not provide incentives for prevention to the parties involved. In the contrary, this could even lead to risk-increasing behaviour in certain cases because compensation in case of a disease outbreak is taken for granted. The current system of expenditure in the veterinary field defined by Council Decision 90/424/EEC is more advantageous than ad-hoc measures, because it defines compensation rules in advance. The legislative framework has been further developed with Regulation 349/2005 that creates clearer rules for compensation and reduces “grey areas” that existed during the evaluation period. However, the current framework is still characterised by some deficiencies:

- Community co-financing is loss-dependent, which may distort competition in favour of high-risk areas. Although Community co-financing may provide incentives for effective and rapid control measures, it does not seem to provide incentives for prevention, especially with respect to prevention measures that are not a minimum standard required by legislation;
- Disease outbreak losses are compensated only partially, focusing on direct losses such as the culling of infected herds, slaughtering and rendering costs etc. This may result in adverse incentives under certain circumstances;
- Community co-financing rules are complex and partially require significant administrative efforts for all parties involved;
- The risk of livestock disease outbreaks to the Community budget has possibly been reduced because of clearer compensation rules, however in principle the current system of co-financing still poses a significant risk for the Community budget;
- Participation of stakeholders in the decision-making process concerning veterinary emergency measures is not encouraged and fully depends on MS implementation rules and the degree to which cost-sharing schemes are already in place at MS level.

4. Existing cost-sharing schemes in EU Member States

4.1. Overview

The following section describes existing compensation mechanisms for farmers affected by epidemic livestock diseases in Europe. It is based on a survey conducted jointly by Civic Consulting and the European associations of insurers CEA, AISAM, ACME. A total of 19 national insurance associations and insurance companies responded to the survey. Please note that hereafter the term “insurer” refers to both the insurance associations and individual insurance companies that responded to the survey.

Currently, compensation in the case of epidemic livestock diseases is provided either as ad-hoc compensation or through a formalised compensation scheme. Ad-hoc compensation is a government expenditure that supports the affected sector based on compensation rules, which are defined as ex-post, i.e., after the crisis occurred. In the survey of insurers within Europe, most of the survey respondents stated that their government had not provided ad-hoc compensation for epidemic livestock disease in the period 2000-2004 to affected farmers whereas insurers from Switzerland, Germany, Greece, and the Netherlands indicated that their governments had provided such ad-hoc compensation.

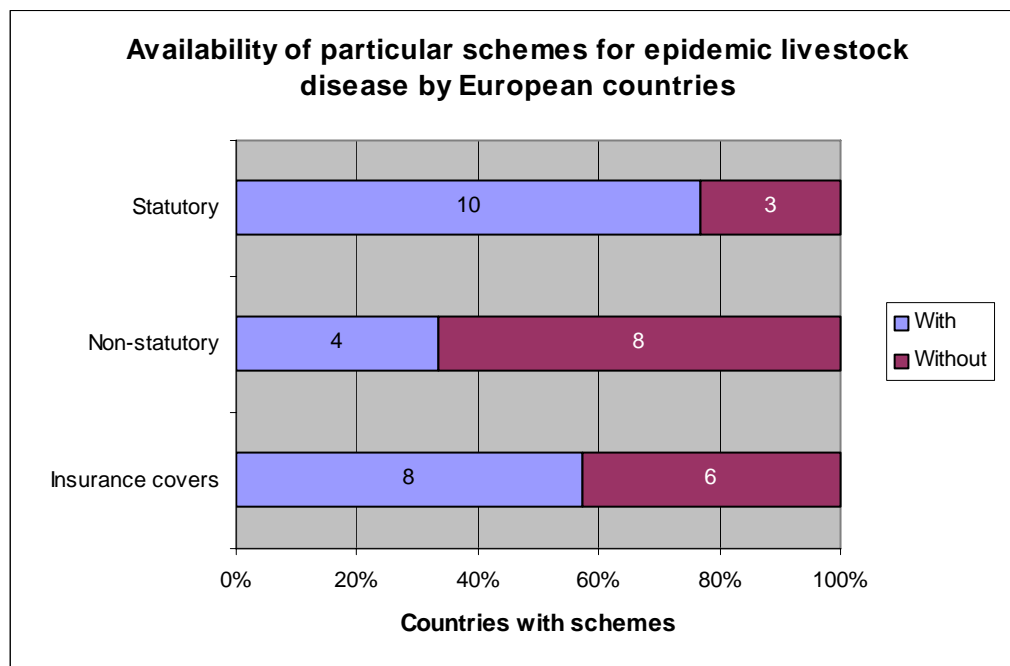
Varying compensation schemes exist throughout Europe in order to protect livestock owners from some of the consequences of an outbreak of epidemic livestock disease and in some countries, farmers share in the financial responsibility. In this analysis, the availability of particular schemes specifically related to epidemic livestock diseases will be detailed for the countries from where filled questionnaires were received.

Compensation schemes for epidemic livestock disease can be categorised generally into three different schemes, which are defined as follows:

- **Statutory compensation schemes:** Rules and procedures for compensating livestock owners are defined by legislation ex-ante (before the outbreak). Private insurers are not involved. Compulsory financial contribution of farmers for compensation payments is possible;
- **Non-statutory schemes:** Private risk-pooling schemes of farmers’ associations without involvement of private insurers;
- **Insurance covers:** Private risk-transferring compensation schemes with involvement of insurers financed with or without public support by a large number of individuals through their insurance premiums.

The availability of these cost-sharing schemes in Europe can be seen below:

Figure 7: Compensation schemes in European countries for livestock disease



Source: Survey of insurers and national insurance associations

It is clear from this figure that in a majority of countries from which responses were received, some form of scheme addressing epidemic livestock diseases does exist.

4.1.1. Statutory compensation schemes

Most of the surveyed countries have a statutory compensation scheme for farmers due to losses from livestock epidemics. Within these schemes, there are various combinations of financing methods for statutory schemes ranging from high levels of governmental support to high levels of financial participation from the stakeholders.

All statutory compensation schemes mostly cover major epidemic diseases with a greater part of the respondents explicitly listing highly infectious diseases such as Foot-and-Mouth Disease (FMD), Classical Swine Fever (CSF), and Avian Influenza (AI). According to survey responses, all available statutory schemes indemnify the value of livestock and a majority of countries (7) explicitly mention that the costs associated with culling are also covered. Further compensation for other direct losses is relatively scarce; survey respondents indicate that only a few countries cover monitoring and control or losses from infected feed or materials. Coverage of consequential losses is significantly less thorough than coverage of direct losses in the statutory compensation schemes; though insurers from 5 countries do indicate that some consequential losses are compensated for. Complete coverage of all losses due to an epidemic outbreak is not covered in any statutory scheme. Coverage for prevention costs is similarly rather limited; insurers of only a few countries indicate that the statutory compensation scheme covers prevention costs while at least for 5 countries it is explicitly stated that prevention costs are not compensated. All of these schemes were reported to cover solely the livestock owners and no compensation is provided to third party stakeholders. Non-statutory schemes and insurance markets in these countries often complement the statutory schemes in compensating farmers for several additional losses.

4.1.2. Non-statutory compensation schemes

Non-statutory compensation schemes without involvement of private insurers (e.g., private schemes of farmers' associations) are considerably less prevalent in Europe. Only from Austria, France, Germany, Spain, and the Netherlands were such schemes reported. Non-statutory compensation schemes described by the survey of national insurance associations are mainly characterised as pools. Generally, all schemes are primarily financed by contributions from the farmers; only for the Austrian scheme it was explicitly stated that the relevant scheme receives funds additional to those contributed by the farmers.

Non-statutory schemes are aimed at very specific disease coverage, as all schemes only cover a limited number of epidemic diseases; the exception is Spain where the coverage of the schemes reportedly is based on internal decisions and disease coverage varies. The schemes vary in their coverage of either direct or consequential losses and only in Austria was it reported that supplementary compensation for prevention costs is typically provided. As in the statutory compensation schemes, solely livestock owners are compensated by all of these schemes.

4.1.3. Insurance covers for epidemic livestock diseases

All countries surveyed do have insurance products on the market for livestock related risks; these cover mostly death and loss of production due to accidents and non-epidemic diseases; more often than not epidemic diseases are excluded in these covers. The market for insurance products for livestock epidemics is significantly smaller in comparison to general livestock insurance markets. Only in 8 of the responding countries⁴¹ insurers offer covers for epidemic livestock diseases, the majority of which were offered in countries where statutory schemes for such diseases exist.

Insurance companies in national markets range from 1 (as in Switzerland) to approximately 10 (as in Germany). Survey responses to a question concerning the approximate market share of epidemic livestock disease insurance were sparse; however, Finnish insurers estimated that 70 % of their market was insured for this kind of cover and the Norwegian insurer Gjensidige estimated that they "have 75% agricultural market share. Of the cattle insured in our company, 80% have disease cover, 65% of the pigs have, and 85% of the poultry and less than 10% of the sheep." Few national insurance associations were able to provide information about the approximate number of farmers and type of livestock presently insured; however, the following information was available:

- Finland: About 20,000 farms;
- UK: Numbers of farmers for the diseases specified: FMD (5,058) for cattle, sheep, pigs; Tuberculosis (7,729) for cattle; Brucellosis (6,072) for cattle; CSF (90) for pigs;
- Norway: Livestock in 16,000 cattle farms, 2,300 pig farms, 1,200 poultry farms, and less than 1,000 sheep farms.

Insurance schemes for epidemic livestock disease are reportedly only systematically offered with non-specialized cover in Germany, UK, Norway and Sweden. Other countries, though they do not offer it systematically, offer coverage for epidemic diseases at an additional premium, as a supplementary cover, or as a separately covered product.

⁴¹ Finland, Germany, UK, Italy, Norway, Spain, Sweden, and Switzerland

In all of these schemes, several of the most contagious diseases are covered (such as FMD which is covered by nearly all schemes). Insurance products covering other diseases can be relatively limited to a very specific, definitive list of diseases or they can be quite comprehensive.

Seven out of the 8 countries where insurance covers for epidemic diseases are available cover direct losses and many cover some consequential losses as well; this generally seems to cover loss of production with additional losses covered in a few countries. Insurers generally impose some form of maximum compensation on their claims, either in monetary terms or in time limits (with respect to business interruption losses).

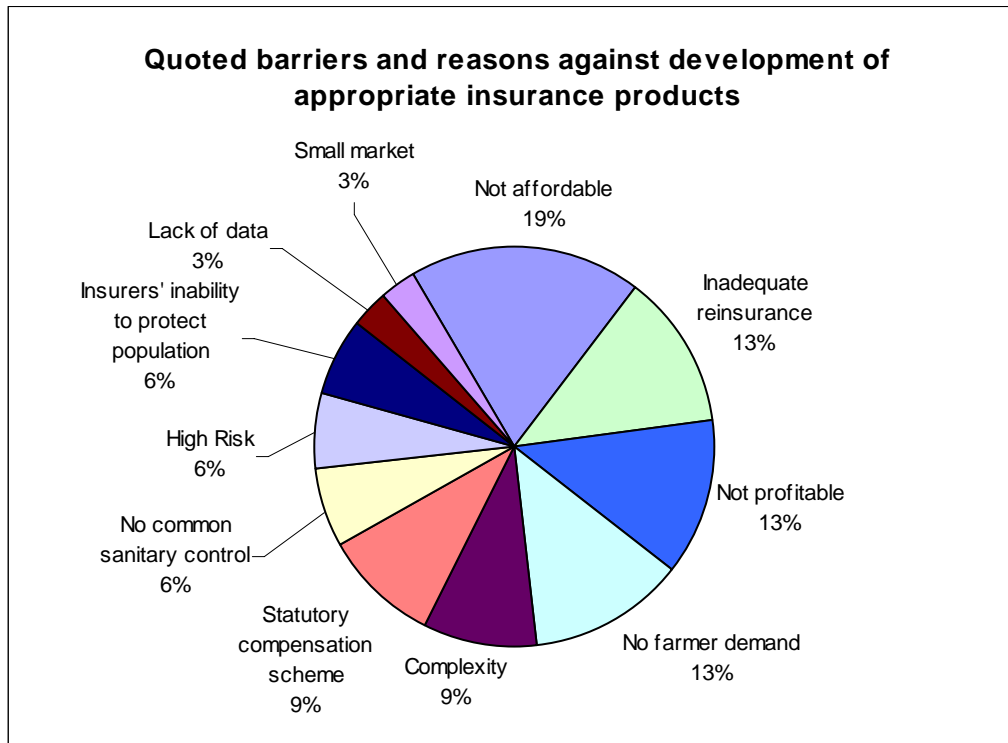
According to the survey, only insurers in Italy explicitly stated that the government provided support to private epidemic livestock disease insurance (via subsidies for insurance premiums) whereas at least 9 countries stated that government does not provide support.⁴² Support via subsidies for insurance premiums is also offered in Spain. However, in Spain only non-epidemic diseases are covered currently, with products covering FMD and Bluetongue under development.

4.1.4. Prospects for private epidemic livestock disease insurance

Clearly insurance products for epidemic livestock disease are available but the market is relatively undeveloped. When surveyed about the possibility of future insurance coverage for epidemic livestock diseases, opinions were split nearly evenly about whether this was a feasible area for development within the sector; 8 respondents were of the opinion that epidemic livestock disease insurance could be a growth segment in terms of future development for insurance companies and 9 respondents did not agree. The main reasons listed as possible barriers have been interpreted into the main categories seen below:

⁴² Austria, Switzerland, Germany, Spain, Finland, UK, Greece, Norway, Sweden

Figure 8: Barriers to the development of insurance products

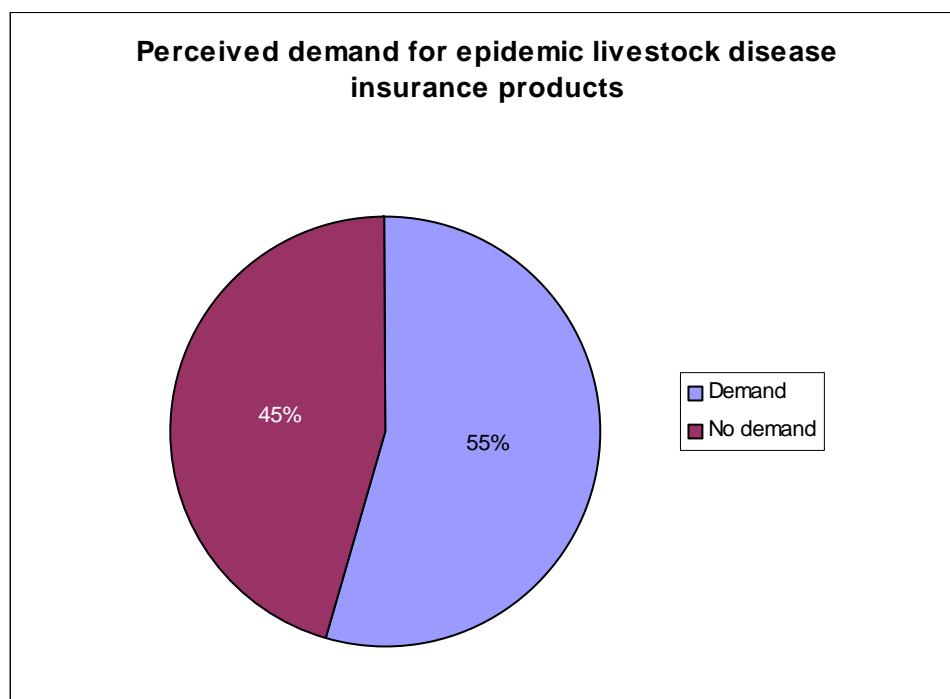


Source: Survey of insurers and national insurance associations

Barriers to development of a stronger insurance market given by the respondents varied widely but the most common concerns was that this product is: (1) not affordable; (2) not re-insurable; (3) not profitable; and (4) that there is no demand for such a product.

However, as can be seen in the following graph, a small majority of respondents (6) reported that they perceive a demand for insurance products that is not currently satisfied on their market, while 5 responded that they did not perceive such a demand:

Figure 9: Demand for insurance products



Source: Survey of insurers and national insurance associations

Of the insurers that cited particular diseases in demand, all cited Avian Influenza as a product in demand. Professed reasons that demand for this disease was not yet satisfied was that there is potential for high losses and an inability to insure the risk associated with this product. Other diseases cited (particularly from Spain) were FMD, Aujeszky, and Brucellosis.

When asked what measures at the European and national levels could encourage the development of this market segment, insurance companies and national insurance associations offered significantly varying ideas for the most feasible ways to pursue these products. The most common suggestions for measures at the European level were European assistance to farmers in the form of: (1) support for a reinsurance system; and (2) subsidies for premiums. Similarly, when surveyed about perceived necessary measures at the national level, the most necessary measures were overwhelmingly considered to be: (1) subsidise premiums; and (2) a national reinsurance cover (see Table 8):

Table 8: Survey responses on necessary measures (EU, national)

Measures	Priorities at the EU level	Priorities at the national level
Reinsurance cover	25%	30%
Subsidise premiums	21%	35%
Make it compulsory	11%	10%
Harmonised legalisation (some form)	11%	-
Help build statistical database	11%	-
Less intervention in market	-	10%
More intervention in market	-	10%

Source: Survey of insurers and national insurance associations

4.1.5. Main results of the survey

The results of the survey have illustrated the diversity of existing compensation schemes among MS. Whereas statutory compensation schemes are existing in most countries, the private insurance market is only developed in very few Member States to a significant extent. Barriers to development of a stronger insurance market for epidemic livestock diseases given by the respondents included that this product is: (1) not affordable; (2) not re-insurable; (3) not profitable; and (4) that there is no demand for such a product. Also, a significant problem seems to be that such products are high in demand when epidemic livestock diseases are “in sight”, such as experienced with Avian Influenza. However, insurers that would very well cover these risks in general seem to be reluctant to sign new covers in these situations. On the other hand, in “peace time” when no livestock epidemic is experienced or publicly discussed, demand for such covers was reportedly significantly lower.

To analyse the variety of existing compensation schemes in more detail, schemes in three countries have been analysed in-depth in the framework of the pre-feasibility study. In all three countries, namely the Netherlands, Germany and Spain, public compensation schemes and private insurance markets and/or mutual funds of farmers for livestock epidemics exist. Also, in these countries farmers participate to a certain extent in cost-sharing schemes to finance costs of livestock epidemics. The systems will be described and main features analysed.

4.2. Case-study I: The Netherlands

In the Netherlands, there is a private-public compensation scheme dealing with epidemic diseases (the Animal Health Fund) and also additional private insurance products against remaining livestock related risks are available.

4.2.1. Institutional set-up of the scheme with public involvement⁴³

In the Netherlands, as in other countries, control measures regarding main epidemic diseases and zoonoses are based on legislation. Because of this legislation and the responsibility to fulfil the rules therein, the ministry is obliged to pay related costs and indemnifications. The ministry pre-finances these payments and uses the Animal Health Fund for this aim. Afterwards the ministry invoices most of the expenses of the Animal Health Fund to the Product Boards. The Product Boards finance these expenses primarily with their reserves and/or using a bank-guarantee and secondly by imposing levies on animal holders.

The Product Boards exist for certain livestock industries and incorporate the whole product chain from the farm to retailing. “A product board operates within the legal framework of a 'statutory trade organisation', which means it is an organisation that is authorised by the government to formulate statutory rules in specific areas for a particular sector. Product boards refer to their organisation as a vertical organisation, by which they mean that they cover all trade and product activities within a given sector.”⁴⁴ There are three Product Boards that are relevant for the Animal Health Fund.

⁴³ Questionnaires of the Animal Health Funds, the Dutch Ministry and the related interviews

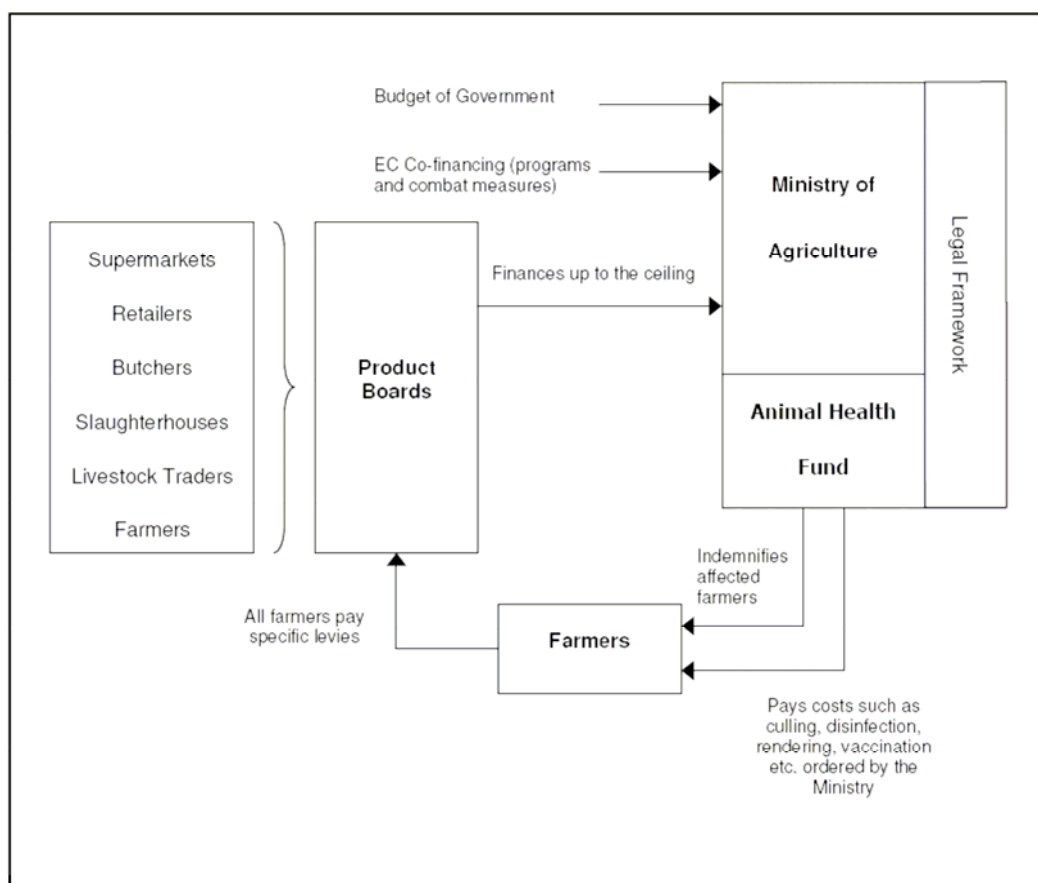
⁴⁴ The Product Boards for Livestock, Meat, and Eggs (PVE), www.pve.nl

The three Product Boards are obliged to reimburse the Ministry expenses related to investigations in case of signs of an animal disease and to the eradication of the disease. The Boards also have to pay 50% of the expenses for the mandatory monitoring programs. These obligations are the result of a negotiation between the government and the representatives of the farmers. Farmers are represented as a member of the board of governors in the Product Boards.

This financial agreement has existed since 2000 and has been renewed in 2004. The sum that the Product Boards have to pay to the government is limited to a pre-determined ceiling of coverage. Expenses above this maximum are born fully by the government.

Within the government there is the Animal Health Fund under the Ministry of Agriculture, Nature and Food Quality. The legal base of the Fund is the *Gezondheids- en welzijnswet voor dieren* (Animal Health and Welfare Act). The government guarantees the Fund. The Fund covers costs of monitoring and eradication measures such as culling, rendering, disinfection, and preventive actions such as vaccination and prevention in case of an emergency, due to epidemic livestock diseases. In addition, the government pays direct losses for non-commercial holders of livestock to ensure reporting of diseases (these are fully born by the government).

Figure 10: The Netherlands' compensation scheme with public involvement



Source: Civic Consulting / Ministry of Agriculture, Nature and Food Quality of the Netherlands

4.2.2. Coverage and indemnification in the scheme with public involvement

The Animal Health Fund covers the value of cattle, pigs, poultry, sheep, and goats for farmers and livestock related materials such as contaminated feed. Major epidemic diseases, such as Avian Influenza, FMD, BSE, Swine fever, and Scrapie, are included in the scheme; however, diseases such as Aujeszky's disease, IBR, Johne's disease and salmonella are excluded. Although the government mainly decides about and conducts culling, rendering, disinfection, and prevention in the case of an emergency, the Fund also covers these costs. Basis of indemnification of the animal value is the market value before the epidemic outbreak or equivalent if market values are not available. The Ministry decides on the final amount of the compensation payment. During the first veterinary inspection after the farmer reports a possible animal disease on his farm, a government veterinarian determines the number of dead animals, the number with visible symptoms and the number of other animals. To give incentives for early reporting, the indemnification is reduced by 50% for visibly sick animals and nothing is paid for animals that are dead at the time of the veterinarian's first visit. Technically the government makes the payments.

The Fund also pays for preventive vaccination in case of an epidemic. Some consequential losses are also covered for veterinarians who lose business for some time because they are not allowed to visit different farms to prevent spreading the disease.

Farmers have to meet certain hygiene and prevention standards and have to be supervised by a veterinarian. These standards are controlled by the General Inspection Service of the Ministry of Agriculture. In addition, economic sanctions will be imposed if there is proof that an outbreak is the fault of the livestock owner concerned or that certain conditions have not been met.

4.2.3. Financing of the scheme with public involvement

As can be seen from Table 9 there are four separate limits regarding the payments of the Product Boards: for the cattle industry including dairy; for the pig sector; for the poultry sector; and for the sheep and goats sector. As an example, the pig sector has to cover expenses of the Animal Health Fund for pigs up to a maximum total of 125 million € in the years 2005 to 2009. In addition, the maximum contribution is determined for different diseases such that, e.g., the poultry sector has to pay a maximum of 18 million € for losses due to Avian Influenza and 2 million € for losses due to the Newcastle Disease. Below the ceiling the production chain pays for the total expenses. As an example, the FMD outbreak in 2001 caused compensation payments of 273.3 million € that were funded by the EU (90.5 million €), by the government of the Netherlands (64.3 million €) and by the cattle, pig, and sheep and goat industry (118.5 million €).

Table 9: Maximum contribution of the related livestock sector to the Animal Health Fund

Livestock	Maximum contribution of the sector 2000 - 2004 (in 1000 €)	Maximum contribution of the sector 2005 - 2009 (in 1000 €)
Cattle	226,900	85,000
Pigs (total)	226,900	125,000
Pigs (African SF and SVD)		46,000
Pigs (other diseases, including Classical SF and FMD)		79,000
Sheep and goats (total)	2,300	5,600
Sheep and goats (FMD, etc)		3,300
Sheep and goats (Scrapie)		2,300
Poultry (total)	11,300	20,000
Poultry (AI)		18,000
Poultry (Newcastle Disease)		2,000

Source: Questionnaire Walter Geluk (Senior policy advisor), questionnaire to Ministry of Agriculture, Nature and Food Quality of the Netherlands

Table 10: Actual contributions of the related livestock sector to the Animal Health Fund 2000-2004 (in 1000 €)

	2000	2001	FMD 2001	2002	2003	AI 2003	2004
Cattle	732	2,546	118,473	8,113	5,392	0	3,494
Pigs	42	294		371	861	0	114
Sheep and goats	0.3	0		0 *	0 *	0	424
Poultry	1.6	0.3	0	8	0	11,345	0 *

* After the FMD outbreak in 2001 the sheep and goat sector had reached its payment ceiling and also the poultry sector after the 2003 AI outbreak. Source: Walter Geluk (Senior policy advisor), questionnaire to Ministry of Agriculture, Nature and Food Quality of the Netherlands

While below the ceiling no costs for direct losses and fighting the outbreak accrues to the government, the government has to compensate animal losses and the culling and rendering costs above the ceiling completely. The government decides about the control measures for diseases. The costs for monitoring

additional to legal standards are paid by the Fund and the government on a 50:50 basis irrespective of the maximum contribution of the livestock sector to the Fund.

The calculation of levies takes into account the indemnifications from previous years that have to be refinanced and a level of reserves that has to be built up for future epidemics. The levies are differentiated and paid proportionally to the animals' age or to the production, e.g. a constant amount per layer or broiler a farmer receives, for the milk amount delivered or for the pigs and cattle slaughtered. Levies are not differentiated among farmers or regions. Thus, levies do not reflect the risks of individual farmers and they do not affect the risk of production. But, as the Dutch Ministry pointed out, because of the risk of direct and consequential losses and the higher levies, farmers have and will take preventive measures voluntarily.

The poultry sector paid its share of 11.3 million € for the losses due to the Avian Influenza epidemic of 2003 by higher levies to restore the capital of the Product Board / bank-guarantee in 2004 (8.7 million €) and in 2005 (5.5 million €). In 2006 the estimated payments of farmers are 2.7 million € for poultry. The Product Board aims to build up reserves of an amount of 12 million €. In detail, a farmer has to pay a levy of €1.69 to the Product Board when he receives 1000 broilers for fattening or a levy of €30.77 (€57.48) for receiving 1000 cage housing (organic) layers in 2006.

4.2.4. Responsibilities and incentive structure in the scheme with public involvement

The Animal Health Fund creates strong incentives for the producers who maintain production after an outbreak to avoid epidemic diseases. However, farmers who expect to abandon production altogether after an outbreak do not have any incentives to avoid epidemics, except quasi-deductibles (reduced indemnification for sick or dead animals) and consequential losses, because they do not pay levies after the outbreak. The government decides about the actions against an epidemic in case of an outbreak.

The incentives for the producers and for the government change when the ceiling of compensation by the Product Boards is reached. Above the ceiling the producers do not bear any of the direct costs of the measures to combat an outbreak. However, each producer still bears his own consequential losses.

4.2.5. Insurance schemes without public involvement

As a voluntary insurance scheme, there are mutual pools covering direct losses of non-epidemic diseases.

Interpolis is a mutual insurance group. It offers insurance against some consequential losses of epidemic livestock disease in the cattle sector covering losses exceeding the indemnification paid by the Animal Health Fund. Thus, they cover the same diseases and have the same trigger. The coverage is additional to insurance covering direct losses caused by non-epidemic risks.⁴⁵

Avipol B.A. – a mutual insurance company – offers voluntary, unsubsidized insurance against salmonella and mycoplasma that are not covered by the Animal Health Fund in the poultry sector. Depending on the risk, treatment costs, replacement costs (i.e. 100% of the market value), and some costs that are not covered by the Animal Health Fund are covered taking into account a 25% deductible. Yearly premiums are €0.04 per rearing parent animal and €0.07 per hen. Table 11 shows

⁴⁵ Information is from the Interpolis questionnaire.

the volatility of losses for this kind of insurance scheme. Between 2000 and 2004 the losses amount to a minimum of €8,000 and to a maximum of €210,000. There are specific hygiene and prevention measures that are set up by the Poultry Product Board and farms are inspected before an insurance contract becomes effective and after infections have been reported. Avipol reports a market share of 80% of insured poultry livestock in relation to the total insurable livestock.⁴⁶

Table 11 : Premiums, restitutions, and indemnities, of Avipol livestock (poultry) insurance

Year	Total premiums (in 1000 €)	Restitution of premiums two years prior (in 1000 €)	Indemnities (in 1000 €)
2000	315	272	8
2001	314	79	210
2002	283	164	61
2003	225	85	59
2004	197	0	209

Source: Cindy Raaphorst, questionnaire to Avipol B.A.

The mutual insurance schemes, such as Avipol and Interpolis are financed by premiums from their customers / members. Restitutions of premiums are significant in years with low losses (see Table 11). The reinsurance premium amounts to 2.5% of the gross net premium income for a stop loss reinsurance offered by the private Interpolis Re.

4.2.6. Strengths of the system

The Animal Health Fund system gives high financial responsibility to the members of the production chain. The production chain has to decide about actions to prevent an outbreak, the Ministry decides about the measures in case of a suspicion and/or an outbreak. Therefore the Animal Health Fund system seems to create appropriate incentives. Also, concentrating on only very few diseases gives high responsibility to the farming sector for these diseases and allows for private risk management solutions.

It has to be noted that there might be conflicts of interests among different members of the production chain (e.g. different regions, different interests between breeder, fattener, and slaughter houses and between the farmers with infected animals and farmers who are forbidden to move their animals or products out of the farms because of veterinary restrictions).

4.2.7. Summary: Main characteristics of scheme

The Animal Health Fund covers animal losses and costs for monitoring, culling, rendering, etc., due to epidemic livestock diseases. This Fund is part of the government of the Netherlands. The Product Boards must repay most of the expenses of the Animal Health Fund (excluded are the expenses related to non-professional animal holders). There are different expenditure ceilings for different livestock

⁴⁶ Avipol questionnaire

species and diseases; below the ceilings the Product Boards and the related sector has to bear all costs and the government will finance all costs that surpass this ceiling. The ceilings are valid for five years and they are established in a bargaining process between the government and the different sectors. For example, between 2005 and 2009 the cattle sector has to bear a maximum of €85 million and the pig sector has to bear a maximum of €79 million for classical swine fever and FMD as well as additional €46 million for African swine fever and SVD. The Animal Health Fund is administered by a department of the Ministry of Agriculture, Nature and Food Quality.

Product Boards represent all the stakeholders of the production chain of certain livestock sectors. The Product Boards have reserves and in case of a large outbreak the Product Boards raise levies and/or use a bank guarantee if it is necessary. The Animal Health Fund makes the payouts to farmers and the government guarantees the money in advance. The levies are differentiated among species, age, utilisation, product, and production system. The compensated values are based on market values. Deductibles are not used but dead animals are not compensated and visibly sick animals only by 50% of the market value.

Private schemes without public engagement exist for consequential losses in the cattle sector and some diseases in the poultry sector. The insurance companies are organised as mutuals.

4.3. Case-study II: Germany

In Germany, there are different institutional schemes for compensating losses of livestock. The most important scheme is the Tierseuchenkassen, which are public funds with compulsory financial contributions of livestock farmers. Private insurance against interruption of business and accidents as well as private insurance for high value animals are common.

4.3.1. Institutional set-up of scheme with public involvement

A *Tierseuchenkasse* (Animal Disease Fund) is generally established for every German state (referred to as “Bundesland” or “Land”); only one *Tierseuchenkasse* covers two states. They are public bodies but are controlled by a Governing Board (Verwaltungsrat) whose members are chosen by the agricultural ministry of the Bundesland, by the veterinary authorities on the county level and by agricultural organizations. The legal base is the Animal Disease Act (*Tierseuchengesetz*) of April 2001; the last revisions were in June 2004. However, federal legislation constitutes only a legal framework; each Bundesland establishes the legal basis according to the Animal Disease Act for their related *Tierseuchenkasse* by its own state legislation. In Germany two legal forms do exist: a “*Tierseuchenkasse*” is a separate legal entity, whereas a “*Tierseuchenfond*” is a special public asset separated from the common budget, without being a separate legal entity. However, rules, rights, obligations, and financial contributions for farmers and the state are equal for a *Tierseuchenkasse* and a *Tierseuchenfond* and the difference in legal form has rather historic reasons and no practical implications.⁴⁷ The first legislation concerning *Tierseuchenkassen* in Germany goes back to 1909.

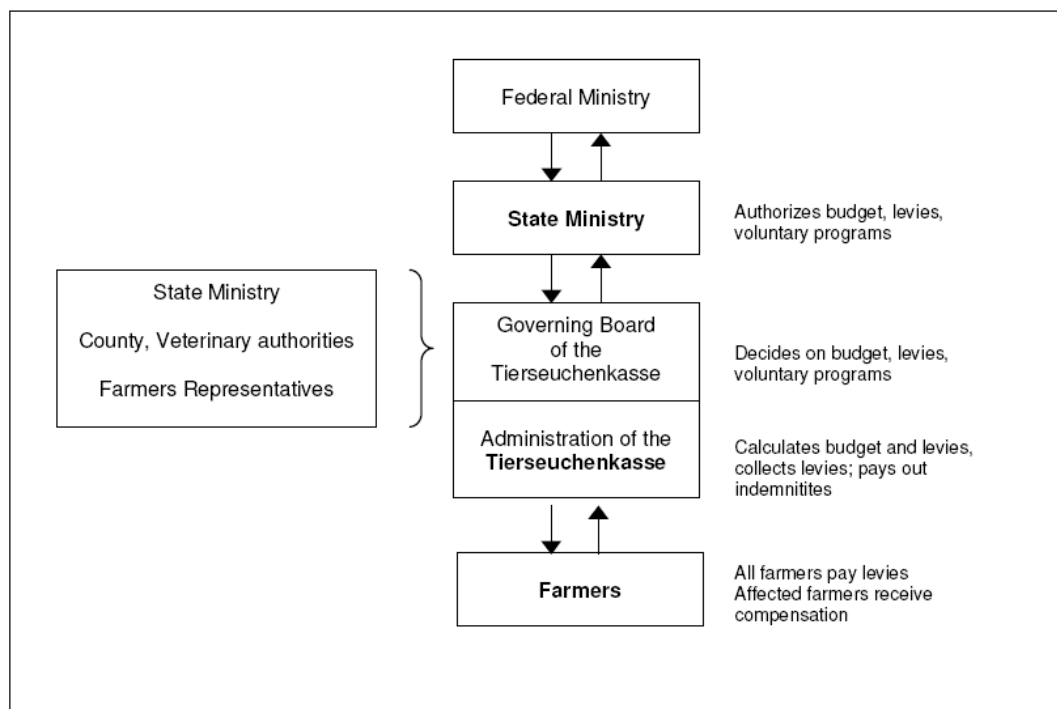
The Animal Disease Funds are regarded as a key organization for improving animal health from a disease perspective, preventing epidemic outbreaks, and fighting outbreaks efficiently. Furthermore, the Funds develop, establish and finance programs and actions to eradicate non-epidemic diseases

⁴⁷ When referring to “*Tierseuchenkasse*” in the remainder of this section, both *Tierseuchenkasse* and *Tierseuchenfonds* are addressed

such as IBR (Infectious Bovine Rhinotracheitis) in cattle. They work together with the local veterinary authorities and are supervised by the state government. In cooperation with the local veterinary authorities, the Funds have to implement eradication and prevention measures decided by the state government. Generally, state governments, in their decision-making process, consult the Funds to integrate their expertise, experience and financial possibilities regarding livestock epidemics. Some tasks, such as prevention measures against non-epidemic diseases (e.g. monitoring) are implemented voluntarily by some Tierseuchenkassen, some other tasks like compensating for rendering or disposing of animal by-products are compulsory in others according to the applicable state law.

The states have to reimburse all livestock holders for the value of compulsory culled animals by law. This is done through the Tierseuchenkassen, which are financed from the state budget (50%) and through levies on livestock holders (50%). In general, the Funds compensate the value of animals. Costs for culling and disposing of animals are also reimbursed. Livestock owners have to pay mandatory levies above a very small, minimum cession amount (Bagatellgrenze) to the Funds; the levies are based on the species, the number of animals and possibly other criteria (see below). Each farmer has to report his livestock to the Fund annually. The amount of the per animal levy for each species depends on expected costs for the common business of each Fund for that particular species; these costs can include prevention measures, building up reserves or repaying credits needed to compensate losses of past epidemics for that species. The annual levies decided by the Administration Board have to be authorized by the state government.

Figure 11: German compensation scheme with public involvement



Source: Civic Consulting / Tierseuchenkassen

4.3.2. Coverage and indemnification in the scheme with public involvement

In general, the Tierseuchenkassen cover diseases that are defined as notifiable epidemic livestock disease such as BSE, Aujeszky's disease and anthrax, and compensate losses from officially ordered culling or losses from animals which died after destruction has been ordered, as well as for animals in which a notifiable disease has been detected after the death of the animal. For every livestock owner, only the actual animals' value is covered which is assessed by the "district veterinary officer" and it is limited by the maximum decided by the Animal Disease Act at a national level, for example, of 3000 € per cattle and 1300 € per swine. In general, the assessed values are considerably lower than the maximum and there is no deductible or coinsurance. Animals that have been dead or culled before notification of the disease are only indemnified by 50%. The average indemnifications per cattle (pig) per year have been between €900 (€90) and €1260 (€180) in Bavaria for 2000 and 2004. The assessed value has to take into account the market value on the day of order of the culling⁴⁸ or values used by the EU for buying animals out of the market if the regional markets have broken down during the epidemic. Thus, the indemnification for later infections of one epidemic outbreak may be smaller than the compensation for the first infected farms due to price changes on the market. This avoids incentives for farmers of infecting their own herd if market prices decrease considerably after the first outbreak of an epidemic.

The compensations of assessors and other stakeholders of their costs are based on the estimation guidelines that were published by the agriculture ministry of the Land. Costs for losses on healthy farms in restriction zones are not covered. Prevention measures in peace time can be (at least co-) financed by a Tierseuchenkasse according to the legislation in the related state. Generally, vaccination programmes are financed by the Tierseuchenkasse. According to the Tierseuchenkassen, administration costs are generally less than 5% of total expenditures.

A farmer's compensation may be reduced or rejected if his levy payment or reporting of the livestock amount have been culpably incorrect, if obligations of the German law concerning livestock epidemics are violated, or if the farmer does not report an infection immediately (this is also a criminal offence according to the applicable law). However, the reductions have to be evaluated for each case and they have to be based on the degree of the farmer's fault.

4.3.3. Financing of the scheme with public involvement

A Tierseuchenkasse is generally equally funded by farmers (via mandatory levies) and the corresponding state. However, some of the losses of an outbreak are covered by veterinary emergency measures paid from the Community budget under Decision 90/424/EEC. These payments are passed from the Commission to the Federal Ministry, which passes the money to the responsible Land Ministry. The Land Ministry then passes half of the payment to the Tierseuchenkasse. If current levies and reserves of a Fund and the credit frame are not sufficient to cover all losses the state is liable for deficits. However, farmers have to finance their share of such deficits by higher levies in the future.

As described in the Animal Disease Act, levies paid by farmers have to be differentiated by species and are computed according to the expected costs for the Fund's common business for this species, for building up reserves for epidemics for this species, and for refinancing previous losses for this animal species. Thus, there is no cross-financing among different species. In Bavaria (Lower Saxony), levies

⁴⁸ Decisive for the calculation of the compensation is the date of the order of the culling because on that date the owner of the animals lost the ownership

for 2006 amount to €3.70 (€3.80) per cattle if the herd is IBR free, €7.70 (€7.50) for remaining herds per cattle, €2.60 (€1.50) per horse, €1 (€0.45) per pig, €1.35 (€1.20) per sheep, and €0.025 (€0.0233) per chicken.

Based on Art. 71 of the Animal Disease Act Tierseuchenkassen can differentiate contributions according to animal age, size of the herd, individual hygienic disease risk and absence of infectious diseases. However, the main differentiations that are or have been applied include a regional risk differentiation, a differentiation based on the absence of infectious diseases and in some cases a differentiation related to the implementation of specific hygiene standards. For example, in the state of Mecklenburg-Vorpommern the levies for pigs are reduced by 50 percent for farms that participate in a program with special hygiene standards that are controlled twice a year by the veterinary authorities. Lower levies for farms meeting specific hygiene standards have also been applied in Lower Saxony between 1996 and 2000. However, controlling costs were about €500,000 per year and ex-post evaluation showed that farms with high standards had not caused substantially lower losses justifying the levy bonus. Lower Saxony also applied a regional ex-post differentiation of pig levies after large outbreaks when the (previous) indemnity payments into some administrative districts differed significantly from their levy contributions.

In common, Tierseuchenkassen aim at a level of reserves amounting to 5% of the market value of insured livestock.

Table 12: Levies per animal of the Tierseuchenkasse in Bavaria and Lower Saxony (2006)

€/ animal	Lower Saxony	Bavaria
Cattle (BHV1 free herd)	3.80	3.70
Cattle	7.50	7.70
Horse	1.50	2.60
Pig	0.45	1.00
Sheep	1.20	1.35
Chicken	0.0233	0.025

Source: Data from Tierseuchenkasse websites of Lower Saxony and Bavaria

4.3.4. Responsibilities and incentive structure in the scheme with public involvement

The system of the Animal Disease Funds gives financial responsibility to the state level (Bundesland), which is responsible for decisions about culling and movement standstills and also to the farmers. Costs for compensating animal values due to epidemics (and other notifiable diseases) are shared between the state and the farmers who are holding livestock threatened by the disease. In case of a large disease outbreak, the Tierseuchenkasse pays indemnifications in advance and the farmers have to repay their share in the following years by increased levies. Thus, the financial responsibilities of farmers are the same in case of small and large outbreaks.

Indemnifications and levies are balanced over time for the main livestock species separately. There is no balancing among different Funds. Thus, responsibilities of different livestock sectors and regions are kept separately ensuring appropriate incentives for farmers to invest in prevention measures and to

monitor each other in a region in case of outbreaks. The farmer has to notify an outbreak (or suspicion) immediately to the veterinary administration. Otherwise, or if other legislative requirements have not been adhered to, the farmer's indemnification can be reduced by the Fund. Also, dead animals are only indemnified by 50% of their assessed value to give incentives for fast reporting of infections. The values of animals are assessed based on actual market values to avoid adverse incentives if the market prices have considerably decreased due to the epidemic. However, farmers who expect to abandon production altogether after an outbreak do not have any incentives to avoid epidemics, except quasi-deductibles (reduced indemnification for sick or dead animals) and consequential losses, because they do not pay higher levies into the Tierseuchenkasse after the outbreak.

Measures for risk-dependent contributions were and are used in some instances (see above), but in a number of Laender Tierseuchenkassen hardly apply any differentiation of contributions (except by type of animal).

4.3.5. Insurance schemes without public involvement⁴⁹

Production insurance, Ertragsschadenversicherung, insures losses from problems in production due to interruption of production, decrease of production, decrease in product quality, constraints on selling (movement standstills), or ban on selling products (including milk) as well as direct losses due to veterinary costs. Public funding is not involved. GDV, the German Insurance Association, reports about ten insurance firms offering such covers. BSE and Swine Fever had caused the most significant payouts between 2000 and 2004. The market leader, Vereinigte Tierversicherung, is a subsidiary of the insurance group R+V Insurance, which is one of the biggest insurance groups in Germany and is owned by German cooperative banks. The Vereinigte Tierversicherung goes back to 1875. Other insurance firms include the Uelzener Allgemeine as well as the LVM.

The production insurance covers notifiable epidemic livestock diseases, other communicable diseases such as Mastitis or foot diseases, accidents such as contaminated feed or breakdown of ventilation, theft, and also contaminated products such as milk. The compensation depends on the contract, e.g. lump sum payment per day or week of interruption or loss of profit for a given period (e.g. a year). The compensation is limited to the insured sum or a maximum time period for compensation of consequential losses due to production problems. Deductibles depend on the contract design (percentage of insured sum; constant sum per animal or day; or no deductible). Only farmers who generate income mainly from livestock production can purchase such insurance cover.

As can be seen from the table below, the German market leader, Vereinigte Tierversicherung, received premium income between 30 and 48 million € per year between 2000 and 2005 from 55,000 to 86,000 contracts. However, these figures include transport insurance for horses and insurance for the recovery of high value animals. A pool of other regional insurance companies including Uelzener Allgemeine, VKB and others raise premiums around five million € per year for business interruption insurance.⁵⁰

The private involvement in the German livestock epidemic insurance systems is worth mentioning. Without any public support private (mutual) insurers are willing to insure not only against epidemic

⁴⁹ Questionnaire of GDV and website of the Vereinigte Tierversicherung:
(www.ruv.de/de/ueber_uns/ueber_r_v/konzernstruktur/geschaeftszahlen/9_vereinigtetierversicherungsgesellschaft.jsp)

⁵⁰ Information from Mr. Hölscher, Uelzener Allgemeine

livestock diseases but they also cover consequential losses (problems in production) due to such diseases.

Table 13: Premiums, indemnities, and contracts of Vereinigte Tierversicherung (livestock insurance)

Year	Total premiums (in 1000 €)	Total indemnities (in 1000 €)	Number of contracts
2000	30,000	24,700	54,600
2001	48,300	32,400	86,000
2002	46,500	38,000	80,800
2003	42,900	35,000	65,200
2004	39,600	34,300	59,700
2005	38,000	34,000	56,800

Source: Vereinigte Tierversicherung website

4.3.6. Other schemes

In the state of Bavaria, there is a FMD-fund compensating losses from interruption of milk production for milk farmers due to Foot-and-Mouth Disease. It is funded by member contributions and is administered by the Bavarian Milchförderfond (Organisation for Promoting Milk Production in Bavaria).

4.3.7. Strengths of the system

The financial responsibility for direct losses of epidemic diseases is shared equally among a German state (Bundesland) and the livestock farmers. In general, each state government and the farmers within it have to bear the financial risks of livestock disease outbreaks in the respective state. This avoids mixing up the responsibilities among regions with more or less separated epidemic risks. Each main livestock sector finances only its own losses.

Indemnification is based on the principle that overcompensation has to be avoided for every stakeholder. Thus, the animal value is based on the market value at the reporting date and costs for personnel (e.g., cost compensation for assessors, additional personnel for eradication measures) are based on the income possibilities the stakeholders would have in other occupations at that time.

The private insurance shows that consequential losses of epidemics can be insurable as well as some direct losses. The Allgemeine Tierversicherung insures the losses for livestock farmers localised in movement standstill zones. These losses are not covered by the statutory fund system.

4.3.8. Summary: Main characteristics of the German system

Animal losses due to epidemic diseases and obligatory slaughter as well as culling and rendering costs in general are covered by the Tierseuchenkassen. They can be described as private-public funds on the

state level. A state bears 50% of the costs and the farmers finance the remaining 50% by obligatory levies differentiated among livestock species. If there is a reimbursement by the Commission (usually 50% of the eligible costs) then half of the reimbursement will go to the Land and half to the Tierseuchenkasse. Large outbreaks above a Fund's reserve have to be refinanced by higher levies in the following years. The compensation values are based on the actual market value and it has to be assessed by the public veterinarian. Maximum values per species are set out by the Law concerning epidemic diseases. The Funds also finance programmes to eradicate specific diseases.

In addition to the compensation provided by the Tierseuchenkassen, private insurance companies offer insurance against production interruption due to accidents, fire, epidemic diseases, and movement restrictions among others.

4.4. Case-study III: Spain

In Spain, there are two different compensation schemes with public involvement. In case of an epidemic and for public eradication programmes for special diseases, there is public compensation for the animal value without private involvement, i.e. farmers do not have to pay levies or premiums to receive the right of compensation. Secondly, Agroseguro offers insurance cover for the livestock industry with premium subsidies and with public engagement for reinsurance. Additionally, there are some private insurance schemes to compliment these public compensation schemes in Spain.

4.4.1. Public compensation scheme without private involvement

In Spain, there is a public compensation scheme without involvement of private insurers for compensation of animal losses in case of epidemic diseases and for eradication programmes of special diseases. The legislation goes back to 1952 when the Law concerning Epizootic Diseases (*Ley de Epizootias*) was published. It establishes the right for farmers to receive compensation payments in case of an outbreak of epidemic diseases. The Law about Animal Health from 2003 (the *Ley 8/2003 de Sanidad Animal*, latest revision by *real decreto 1473* in 2005) in conjunction with several *real decretos* about, e.g. the compensation values and the inclusion of BSE and Bluetongue, constitute today's legal base. The system is administered by the local governments of the 17 Spanish regions (states) while the national government regulates the legal base of the public compensation scheme. It is financed equally by the national government and the regions while, in general, EU funding covers 50% of the costs. Two different schemes exist. The first scheme considers programmes of eradicating special animal diseases such as tuberculosis and brucellosis due to vaccination and culling if necessary. The programmes cover the costs of vaccination as well as eradication and compensate the loss of animal value (or the decreased value in case of vaccination and loss of culled animal) up to 75% of a legally established market value. In the second scheme, for diseases from the former list A of the OIE (plus BSE) 100% of a legally established value is compensated for farmers. However, this value is not estimated for each case of compensation but it is established annually by The Ministry of Agriculture, Fisheries and Food for every species taking into account the age and utilisation of the livestock and the production system. Compensation values can be seen in Table 14. If the total livestock of a farm has to be culled due to other diseases than tuberculosis and brucellosis the compensation payment can be increased by 25%. In case of BSE, rendering costs are covered, too.

Table 14: Current compensation values for cattle and pigs

Livestock	Disease	Age	Established animal value (in €)
Cattle	Brucellosis, tuberculosis (only 75% of the established value are compensated)	younger than 3 months	156.26
		3 months to 12 months	300.51
		1 year to 2 years	384.65
		2 years to 5 years	528.89
		5 years to 10 years	480.81
		older than 10 years	240.40
Cows	BSE (100% of the established value are compensated)	younger than 3 months	330.56
		3 months to 12 months	643.08
		1 year to 2 years	1,081.82
		2 years to 8 years	1,382.33
		8 years to 10 years	992.67
		older than 10 years	691.16
Cattle fattening	BSE (100% of the established value are compensated)	younger than 3 months	360.61
		3 months to 12 months	901.52
		1 year to 2 years	1,081.82
Pig (crossbred)	Classical Swine Fever (100% of the established value are compensated)	Boar	420.71
		Sow	300.51
		Hog below 10 kg	30.06
		Feeding pigs	Specific rule

Source: Survey questionnaire Spanish Ministry of Agriculture

The compensation expenditures for some non-epidemic diseases and classical swine fever in Spain between 2000 and 2004 are reported in the table below. The livestock compensation for brucellosis and tuberculosis (cattle, sheep and goat) amounted to €96 million and €51 million, respectively. BSE has cost €5.5 million. Classical swine fever caused compensation payments of €13.6 million in 2001 and 2002.

Table 15: Compensation payments for direct losses, due to non-epidemic diseases and CSF, and eradication programmes

Year	Affected livestock	Disease	Total compensation payments (in million €)
2000	Sheep and goat	Brucellosis	12.1
	Cattle	Brucellosis	7.3
	Cattle	Tuberculosis	14.6
2001	Sheep and goat	Brucellosis	14.8
	Cattle	Brucellosis	6.9
	Cattle	Tuberculosis	10.7
2001-2002	Pig	Classical Swine Fever	13.6
2002	Sheep and goat	Brucellosis	12.5
	Cattle	Brucellosis	9.7
	Cattle	Tuberculosis	10.2
2003	Sheep and goat	Brucellosis	9.2
	Cattle	Brucellosis	7.8
	Cattle	Tuberculosis	8.8
	Sheep and goat	BSE	1.7
2004	Sheep and goat	Brucellosis	6.1
	Cattle	Brucellosis	9.4
	Cattle	Tuberculosis	6.7
	Cattle	BSE	1.9
	Sheep and goat	BSE	1.9

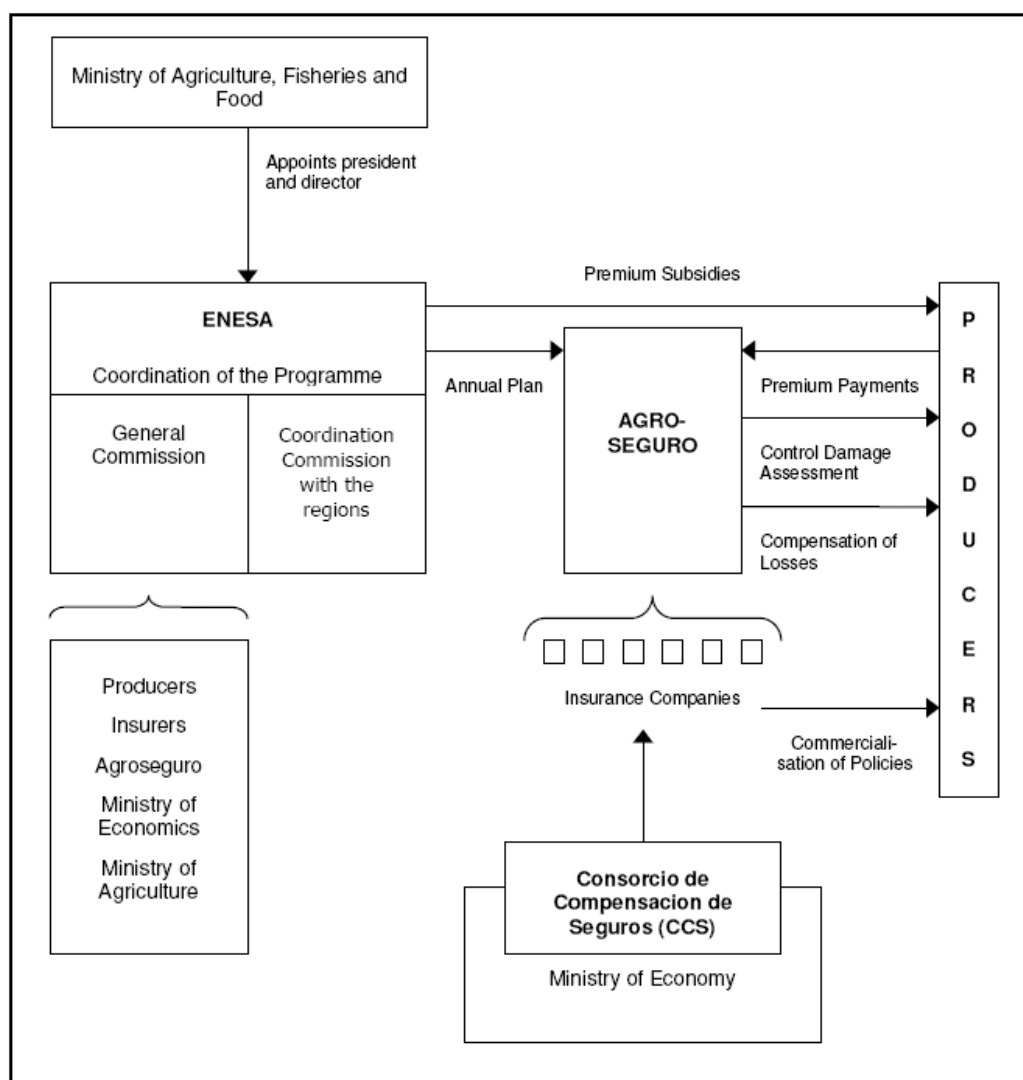
Source: Survey questionnaire Spanish Ministry of Agriculture

4.4.2. Institutional set-up of Agroseguro

Agroseguro offers insurance cover for the livestock industry with premium subsidies and with public engagement in a stop loss reinsurance via the Insurance Compensation Agency (*Consorcio de Compensación de Seguros CSS*). Agroseguro is a pool of currently 33 private insurance companies active in agriculture that distribute the insurance contracts. Agroseguro does ratemaking, assessing indemnities, paying out compensations, etc. The developing of new (subsidised) products is only started once there is a feasibility study which must be ratified by Agroseguro and it is included in the annual plan by the Ministry for Agriculture, which is involved via ENESA (see Figure 12). ENESA (*Entidad Estatal de Seguros Agrarios*) is an organisation attached to the Ministry of Agriculture. Although its president and director are appointed by the Ministry, two main bodies of ENESA incorporate major stakeholders of the agricultural insurance system in Spain and decide on the annual plan for Agroseguro. The annual plans set the framework for the insurance system in terms of level of subsidies, insurable production, minimum standards of production, etc. Producers, insurance companies, Agroseguro, the Ministry of Economics, and the Ministry of Agriculture delegate

members to the General Commission and representatives of the Spanish regions form a Coordination Commission. This system has been established in 1978.

Figure 12: The Spanish agricultural insurance system



Source: Civic Consulting / Agroseguro

Agroseguro offers insurance for crop production as well as livestock. For crop insurance, Agroseguro collected 4.5 billion € of premiums between 1978 and 2003. Public support was 54% of this sum and it has been increasing in recent years⁵¹ whereas premium subsidies relative to premiums are even higher for the livestock insurance schemes (see Table 16). Livestock premiums amount to one third of the total premiums of nearly half a billion € in 2003⁵². However, epidemic diseases are not covered but only specific non-epidemic diseases for cattle, as well as accidents and incineration for the main livestock species.

⁵¹ “Risk and Crisis Management in Agriculture”, Report for European Parliament, page 59

⁵² Agroseguro (2006) *Statistics*. Retrieved June 1st, 2006 from www.agroseguro.es

While participation is low for the insurance against accidents (8.4% of sheep and goat, 17.4% of bovine, and 6.5% of the remaining insurable animals are insured) it is extremely high for the insurance against incineration (more than 90% of bovine and more than 50% of the remaining animals are insured under this scheme).⁵³ There is no specific price control on the market for agricultural insurance in Spain.

4.4.3. Coverage and indemnification

The products of Agroseguero insure risks such as death, compulsory slaughter, and incapacity or loss of specific function of an animal caused by an accident or illness (no epidemic diseases). For cattle fattening, all diseases except those included in the list of the World Organisation for Animal Health (OIE) (however, with the exception of anthrax and Bovine Respiratory Syndrome) are covered. For cattle breeding, all diseases (including Brucellosis, Leucosis, Tuberculosis, and BSE) except epizooties are included. Remaining livestock diseases and illnesses are excluded. The values per animal are set by the government before each year based on market values of previous years and accounting for the fact that there is public compensation for some diseases as explained in 4.4.1. The deductible varies from 10% to 20% depending on the livestock. An insurance including seizure and incineration (except pigs) covers these costs, which can amount to an average of €200 per animal.

Guarantees against BSE and FMD (introducing the latter into the market is expected for 2006) can be chosen by cattle farmers in addition to the basic cover against accidents, fire, attack of wild animals, mastitis and others. These guarantees cover the consequential losses accruing from fixed costs which have to be paid even though cattle production is interrupted on the farm. For some other insurance guarantees veterinary costs are also covered.

The Ministry sets certain technical standards the farmers have to meet to be insured and to receive indemnification in case of a loss. Legally, these standards may go beyond common legal standard. In general, Agroseguero is obliged to accept every farmer as a customer without inspecting the production and hygiene standards on the farm. However, there are some inspections during the life of the contract. There is no simple automatic rule that ensures very early reporting of farmers. However, in general the indemnification is reduced if the loss has increased due to negligent behaviour of the farmer. Premium bonuses can be applied to farmers with production technologies of very high standards.

Table 16 shows the premiums, indemnities, and subsidies between 2000 and 2004 of the Agroseguero livestock insurance products; the premiums have more than doubled between 2000 and 2004. They started from 31 million € in 2000 and reached more than 160 million € in 2004.

The administrative costs have ranged between 4.2% and 5.5% of the total premium income of Agroseguero between 1992 and 2003.⁵⁴

4.4.4. Financing of the Agroseguero scheme

The Agroseguero products are financed by premium payments of the farmers, premium subsidies and reinsurance support. The Insurance Compensation Company (CSS) covers as an average 70% of the Agroseguero reinsurance volume; the remaining 30% is covered by private reinsurance firms.

⁵³ Questionnaire Mr. Torano, Agroseguero

⁵⁴ Agroseguero (2006) *Statistics*. Retrieved June 1st, 2006 from www.agroseguero.es

Table 16: Premiums, indemnities, and subsidies of Agroseguro livestock insurance

Year	Total premiums (in 1000 €)	Total indemnities (in 1000 €)	Total premium subsidies (in 1000 €)
2000	31,030	36,670	17,120
2001	57,970	44,960	32,100
2002	141,810	90,990	95,710
2003	146,310	105,510	95,670
2004	160,090	111,760	100,850

Source: Survey questionnaire Agroseguro

Table 16 shows that total collected premiums amounts to around 160 million € in 2004 of which 100 million are premium subsidies. Thus, 63% of collected premiums are subsidies. The high increase in premiums, indemnities, and subsidies between 2000 and 2004 is mainly caused by an insurance covering incineration costs related to BSE. The premium for the incineration insurance amounts to €3.85 per animal.

4.4.5. Insurance schemes without public involvement

Private insurance firms such as MAPFRE offer insurance cover against animal losses due to accidents, against loss of production due to accidents, and against loss of production (only concerning milk and calves) due to named epizooties, such as Brucellosis, Leucosis, Tuberculosis, and BSE for cattle and dairy farms that are not covered by the public nor the Agroseguro schemes. MAPFRE is also a member of Agroseguro. The pig industry can insure against loss of production due to the epidemic diseases Classic or African swine fever. There is no public support for premiums or reinsurance.

4.4.6. Strengths of the system

Compared to ad hoc compensation, the clear legal basis enables planning reliability for farmers. This system maximises planning reliability for farmers since levies are not increased after outbreaks to finance the costs of past outbreaks.

Private insurance products offered by the mutual insurance firms show that private insurance is at least possible for non-epidemic livestock related risks. Moreover, these private schemes cover losses of production interruption due to Swine Fever while, in general consequential losses such as interruption of production and the risk of an epidemic disease such as CSF seem hard to insure.

4.4.7. Summary: Main characteristics of scheme

The Spanish system is based on two pillars. First, a public compensation scheme without financial contributions by the farmers covers livestock losses due to epidemic diseases and due to diseases that shall be eradicated by national hygiene programmes. The compensated values are established by regulation and not by the actual market conditions. For epidemic diseases, these values are generally higher than for other diseases to be eradicated to give incentives for high hygiene standards on farms to prevent non-epidemic diseases such as Tuberculosis and Brucellosis. Farm hygiene standards are controlled at least annually by public veterinarians.

The second pillar is an insurance system with public premium subsidies and mainly public reinsurance. The insurance products are developed by a public agency ENESA in cooperation with the private insurer Agroseguro that represents a pool of 33 insurance companies. In general, the Agroseguro products do not cover epidemic diseases but losses due to accidents or rendering. The government establishes the compensation values and subsidies. Deductibles between 10% and 20% are used. The premium income of Agroseguro's livestock products amounts to around €160 million whereas subsidies hold a share of around 63% for the three first years of the coverage of the costs of seizure and incineration. At the present time, according to Agroseguro, this percentage has decreased apparently to a maximum of 54%.

4.5. Conclusions

The schemes described above can be analysed from a farmers' perspective: In a farmers' view the planning regarding the costs of disease outbreaks depends on two factors:

- the level of indemnification relative to the loss and;
- the degree to which diseases outbreak losses are re-financed through higher contributions to a scheme (ex-post financing of costs).

In this perspective the schemes analysed differ significantly. On the one hand, there is no ex-post financing of the costs in the Spanish system and the compensation values shall equal the market value. However, since the compensation values are established annually they do not necessarily represent the market values. On the other hand the German and Dutch systems indemnify values equal to the actual market value. However, in these cases there is a kind of coinsurance because dead animals are compensated at lower levels. Concerning the extent of cost-sharing and the financial responsibility for farmers we have to differentiate between small and large epidemics. In the Netherlands, the costs (animal losses, culling and rendering costs, agricultural consequential losses) due to smaller epidemics are borne completely by the farmers except the Community co-financing while all direct losses above some ceiling are borne by the government in the case of larger epidemics. German farmers bear half of the direct losses (excluding Community co-financing) for every epidemic while farmers in other countries may not contribute at all to direct losses. Those farmers may be best off in an epidemic, while Dutch farmers are better off than their colleagues in Germany for very large epidemics and vice-versa, German farmers are better off than Dutch farmers for small epidemics.

A differentiation of financial contribution among farmers by regions, measures of the regional agricultural structure, and by farm-level risk measures may enhance a single farmer's preventive actions and can – in the long run – improve the regional allocation of livestock production taking into account the epidemic risk. Since Agroseguro calculates premiums based on insurance principles the Agroseguro products include as many observable risk measures as appropriate (taking costs for providing information into account). The German system allows for some regional ex-post differentiation of levies and it allows for farm level differentiation, which, however, is applied only in some cases. In the Netherlands, there is considerable differentiation among production systems but not among regions.

Farmers' financial responsibility for direct losses that may affect on-farm biosecurity standards is different among the countries analysed. The farmers' share is a 100% of the national contributions for limited outbreaks in the Netherlands. The share of financial responsibility for larger outbreaks depends on its magnitude because the government bears all direct losses above pre-defined ceilings. German farmers bear through the system of *Tierseuchenkassen* half of the direct losses that are not reimbursed by the Community while farmers in other countries may not bear any direct losses caused by epidemic

diseases. These differences between Member States could imply a distortion of competition (*criteria b of Evaluation Question 10*).

The question whether the existing cost-sharing scheme have led farmers to take more responsibilities in the prevention and resolution of animal health crises, is difficult to answer, as one would need to compare the situation before and after the introduction of a cost-sharing scheme, if all other factors would remain similar. However, anecdotal evidence seems to indicate that the mere existence of a cost-sharing system provides an incentive for farmers to consider more effective bio-security measures. An involvement of farmers' organisations in negotiating compensation conditions in "peace time" and/or in the management of the scheme also provides a clear possibility to take on more responsibility and to set and communicate prevention priorities. At an individual level, incentives very much depend on the details of the compensation rules applied. Farmers are responsible for detection of outbreaks in all countries and compensation payments can be reduced due to late reporting and negligent behaviour. Farmers in the Netherlands do not receive compensation for animals that are dead at the first visit of the veterinary authority and only half of the animal value for animals with visible disease symptoms. In Germany compensation is reduced by one half for dead animals. These rules therefore are likely to provide additional incentives for prevention and rapid reporting of disease outbreaks to the veterinary authorities (*criteria f*).

5. Analysis of options for harmonised cost-sharing schemes

As has been pointed out in the introduction, a central question to be addressed in this pre-feasibility study is whether “insurance schemes” or other similar financial schemes (hereafter referred to as cost-sharing schemes) covering direct and/or indirect costs can be considered as viable options to prevent major financial risks for the Member States or for the Community budget. Related issues that were addressed in the Terms of Reference include:

- Harmonized approach towards the financing of animal disease costs, avoidance of distortion of competition between Member States (*criteria b of Evaluation Question 10*);
- Levels of responsibility of producers and other funding beneficiaries as regards the prevention, the detection and control of major epidemic animal diseases (*criteria c*);
- Effective and efficient incentives for disease transmission prevention (*criteria f*).

Based on these considerations and taking into account relevant policy documents and discussions with the Commission, Member States’ representatives and stakeholder organisations, a set of criteria was developed that any cost-sharing scheme would have to fulfil in order to be analysed in this pre-feasibility study. These criteria were widely accepted at a stakeholder workshop on 17 March 2006 and in written statements forwarded to the evaluation team. Some suggestions for additional criteria were received and have been considered in the final version of the criteria presented below.

5.1. Criteria for harmonised schemes for the sharing of responsibilities and costs of epidemic livestock diseases

Cost-sharing schemes considered in this pre-feasibility study fulfil the following criteria:

I. Categorisation of animal diseases

Cost-sharing schemes have to take into account that the public interest in managing risks associated with a particular disease depends on the possible public health, animal health and/or economic impacts of an outbreak. Diseases have to be categorised accordingly.

II. Efficient risk transfer and incentive compatibility

A main function of a cost-sharing scheme is to compensate operator’s costs and losses in case of disease outbreaks, i.e. to transfer the risk from operators to the scheme.

Compensation payments and other incentives provided by cost-sharing schemes have to be designed to encourage risk-reducing behaviour of all parties involved. “Above all, ... incentives for preventive measures to reduce risks and avert crises, and to minimise their effects, must be provided.”⁵⁵

⁵⁵ European Parliament, Report on risk and crisis management in the agricultural sector, Committee on Agriculture and Rural Development, FINAL A6-0014/2006, 30.1.2006

III. Balancing costs and responsibilities

The financing of cost-sharing schemes has to reflect the responsibilities of the parties involved. The costs of disease control, eradication and prevention should be shared. Government intervention is needed to facilitate this, while taking into account the principle of subsidiarity.

Social aspects, i.e. affordability and social consequences of costs-sharing schemes, have to be considered.

IV. Harmonisation, prevention of distortion of competition

State intervention should not lead to a distortion of competition between Member States. Cost-sharing schemes should be harmonised to the extent necessary to allow for efficiently managing animal disease risk.

V. Compatibility with EU requirements and ongoing initiatives

Cost-sharing schemes should operate within a framework for state-support that takes into account EU and WTO requirements. Cost-sharing schemes have to be seen in the context of the ongoing discussion on risk and crisis management in the agricultural sector⁵⁶ and the results of the CAHP evaluation.

VI. Effectiveness and rapidity of response, flexibility of implementation

An EU framework for cost-sharing schemes should support effective and rapid control measures in case of disease outbreaks, while taking into account existing institutional arrangements.

“In developing EU-wide systems for cost sharing, there is a need for a common framework which allows flexibility of implementation by Member States.”⁵⁷

5.2. Main functions of a cost-sharing scheme

Existing compensation schemes are mainly focused on providing a compensation mechanism for operators in case of disease outbreak. Only very rarely prevention measures are supported (see section 4.1). The lack of financing of prevention measures may in some cases lead to inefficiencies, as the total costs of an outbreak might be higher than what it would have cost to prevent the outbreak of the disease or contain it at an early stage by applying appropriate bio-security measures.

An *efficient cost-sharing scheme*, however, takes such considerations into account and aims at minimising total costs and losses of disease outbreaks over time. By doing so, it is a part of efficient animal health risk management (see box below).

⁵⁶ COM(2005) 74 final of 09.03.2005; European Parliament, FINAL A6-0014/2006 of 30.1.2006

⁵⁷ Informal Meeting of CVOs, Edinburgh, 7 September 2005

In the following sections, a *cost-sharing scheme (CSS)* is defined as an institutional and operational framework that leads to an efficient management of animal health risk. A cost-sharing scheme is more than just a compensation mechanism, it is also an arrangement for promoting efficient prevention and control measures of governments and operators. CSS therefore have two main functions:

- *Promoting efficient prevention and control measures:* Contributing to determination and implementation of efficient prevention and control measures;
- *Providing efficient risk transfer:* Collecting contributions and compensating producers against costs and losses of disease outbreaks (risk transfer).

Both functions are described in more detail below.

5.2.1. Efficient prevention and control measures

5.2.1.1. What are efficient measures?

On the one hand, efficient animal health risk management involves *prevention measures*, i.e. measures that reduce the risk of a disease outbreak. On the farm-level, these are mainly bio-security measures, but also production management decisions like the decision of a pig producer to change to all-in-all-out production⁵⁸. Examples at the Community and MS level are the eradication of diseases which are endemic in wild boar in certain regions, or implementation of legislation regarding the treatment of swill, and many more. Efficient animal health risk management implies conducting animal disease prevention in an efficient manner. This does not necessarily mean to implement a maximum level of disease prevention, as this might imply in some cases more costs than benefits. Efficient prevention measures are prevention measures that reduce overall costs when taking into account prevented losses of disease outbreaks over time.

On the other hand, efficient animal health risk management also involves *control and containment measures*, i.e. measures that reduce the overall costs and losses when an outbreak occurs. Examples at the farm-level are the timely notification of the authority in charge of livestock safety after disease-symptoms are discovered. At the regional level, the establishment and control of protection and

Efficient Animal Health Risk Management

Efficiency in animal health risk management is characterised by reaching the most beneficial situation of livestock production for society, i.e. by safeguarding a maximum difference between expected benefits and expected costs. Inefficiency by contrast simply means that money is wasted. Efficiency as a policy objective is not arguable; however, the outcome of a scheme geared to efficiency may compete with other relevant aspects such as social acceptance. These conflicts will be taken into account in the course of the analysis.

⁵⁸ All-in all-out production attempts to break the reoccurring pattern of disease transmission. In traditional production systems, younger pigs are placed in contact with older pigs. Therefore illness may be passed to younger pigs. In contrast, with all-in-all-out production a site, building or room is populated at the same time by pigs of the same age and depopulated completely at the appropriate time, cleaned, disinfected, dried and left empty for up to a week before populating again.

surveillance zones⁵⁹ are important control and containment measures. On the MS level, the development of contingency plans in peace-time to make sure that appropriate emergency measures are implemented in due time when a dangerous disease outbreak occurs is an important control and containment measure. Similarly to what was said regarding prevention measures, efficient control and containment is not necessarily characterised through a maximum of control and containment, as e.g. the costs of movement restrictions have to be balanced with the impact on disease containment. It does, for example, not make sense to establish a country-wide movement restriction for pigs when a CSF-outbreak occurs on one farm, but it may be efficient to implement a restriction zone with a 10 km radius.

5.2.1.2. Determining and implementing efficient measures

In order to ensure efficient animal health risk management two separate tasks have to be fulfilled. Independent of the question whether a public organisation, an individual operator or both parties are responsible for certain prevention and control measures, an efficient measure firstly has to be determined, and secondly, it has to be implemented. In many cases, both tasks are performed by the same party. Whether adapting an all-in-all-out pig production is efficient or not has to be determined and, if it is considered as efficient, implemented through an individual operator. Every measure regarding EU border control is determined and implemented through government authorities. However, in other cases the party determining the measure is different from the party that implements it. For example, the party responsible for determining legislative standards concerning on-farm prevention differs from the party that ultimately implements these standards (the farmer). Regulation is made by public institutions, and the implementation of regulatory prevention and control measures on farms ultimately depends on operators' compliance with legal standards. Therefore a CSS as part of efficient animal health risk management involves responsibilities of both government authorities and livestock producers, since both parties play decisive roles in the implementation of efficient prevention and control measures.

5.2.1.3. The importance of third parties

The determination and implementation of efficient prevention and control measures often involves *third parties* besides operators and authorities. Field veterinarians play a special role in animal health management⁶⁰. Due to their knowledge and experience, their support in the determination of efficient prevention and control measures is indispensable. Furthermore, field veterinarians implement measures on farms that are relevant for bio-security and early detection. Efficient animal health risk management is therefore characterised by a close relationship between authorities, farmers and field veterinarians. The establishment of networks for cooperation and coordination between these parties is of great importance to ensure animal health. Third parties however are not necessarily "players" in a CSS. They are just commissioned, either from governments or from operators, and provide animal health services. Therefore we do not explicitly analyse the role of third parties in the following, but keep in mind that the development and implementation of efficient prevention and control measures requires third parties' services and that their performance on the job is crucial for animal health.

⁵⁹ In the following, we will refer to protection and surveillance zones as "restriction zones"

⁶⁰ FESASS emphasized this point in an interview on this pre-feasibility study

5.2.2. Efficient risk transfer

A CSS has to fulfil *insurance functions*, i.e. transfer animal health risk away from farmers. By covering the farmers' risk of disease for the payment of a premium the cost-sharing scheme increases for the farmer the predictability of disease related losses both in time and amount compared to a situation without insurance. Animal health risk is not purely stochastic. Farmers can reduce risk through bio-security measures. If poorly designed, insurance can reduce the incentive of farmers to reduce risk and counter the objective of efficient animal health risk management.⁶¹ Hence it is crucial to design a cost-sharing scheme in a way that it compensates operators' disease outbreak losses and induces them to implement efficient prevention and control measures. The relationship between risk transfer and the incentives for producers to reduce risk, i.e. the willingness of farmers to meet their responsibilities, will be analysed in detail in section 5.5 below.

5.3. The need for government intervention

5.3.1. Public benefits

Efficient animal health risk management is a joint product of governments' and operators' efforts. In order to get a clear description of public and individual responsibilities, it is important to analyse why there is government responsibility at all.

From an economic point of view, government intervention is only necessary when markets fail. Market failure can have several reasons, and the predominant reason for market failure in animal health risk management is that prevention and control measures can involve very high public benefits. When individual producers decide about implementing such measures, they mainly take into account costs and benefits accruing directly to them. They do not necessarily consider costs and benefits accruing to third parties, e.g. other producers.

Public Benefits of Prevention and Control Measures

Many measures in animal health management involve *public benefits*, i.e. benefits that accrue to other parties that neither decide about the implementation of the prevention and control measures nor pay for them. These effects on third parties are called externalities in economic theory. In this study, they are called public benefits.

This can be illustrated by the following example: Consider farmer A who thinks about improving on-farm bio-security. The farmer has to incur additional expenditure for bio-security, but benefits from lower expected losses because of a lower probability that the herd contracts a contagious disease. Accordingly the probability of the herd of a neighbour (farmer B) being infected with a contagious disease which firstly occurred on farmer A's premises decreases, too. Assume that farmer A acts purely according to microeconomic principles by deciding not to improve bio-security because the costs would exceed the potential benefits accruing to himself. However, if the benefit accruing to the neighbour had been taken into account, improved bio-security would have been worthwhile from a macroeconomic point of view. This illustrates that the private market outcome is inefficient in this case. This is a very simple example for market failure, but it can be applied to many other decisions regarding animal health measures, since most of these measures involve public benefits. In general, on-farm bio-security measures that reduce the risk of infection with a highly contagious disease

⁶¹ Gramig, Ben M., Barry J. Barnett, Jerry R. Skees and J. Roy Black (2006), Incentive Compatibility in Risk Management of Contagious Livestock Diseases, in: The Economics of Livestock Disease Insurance, Cambridge, page 48

always involve public benefits, because if the risk of infection is reduced on one particular farm, it is automatically reduced on all farms in the same region, since the probability of a spread from that particular farm decreases. As operators may not take public benefits into account, the private market outcome without any kind of government interventions could lead to an inefficiently low level of on-farm prevention.

Public benefits of prevention and control measures are not limited to the livestock production sector. They also accrue to industries related to livestock production, as far as they reduce the probability or economic impact of large-scale outbreaks that lead to business interruption costs in related industries. Even unrelated industries like the tourism sector can benefit from prevention and containment measures⁶². As far as prevention and control measures reduce the risk of zoonoses, public health benefits accrue to the entire society. Public benefits furthermore do not only arise from on-farm measures. Also measures at Community or MS-level like border control involve public benefits.

We have seen that if decisions about prevention, control and containment are made on private markets, the outcome may not be efficient⁶³. Several questions arise then: How can government intervention improve animal health? Should government intervention apply to all, or just to certain kinds of prevention and control measures? In other words, we have to define government responsibility in animal disease risk management as clearly as possible. For this aim, we will differentiate between four levels of government intervention:

- Government provision of prevention and control measures;
- Regulation;
- Compulsory insurance;
- Subsidising prevention.

5.3.2. Government provision of prevention and control measures

If markets fail to generate the efficient amount of prevention and control measures, government intervention could directly provide such measures. This is a standard approach as far as prevention and control measures are public goods⁶⁴, e.g. EU border control to prevent the import of diseases, etc. Also private goods can be provided through governments. A veterinary authority that believes one standard veterinary health check per month on each cattle farm is efficient could simply send veterinarians to each farm once a month.

⁶² A striking example is the FMD outbreak in the UK in 2001. Losses outside of the agricultural sector and related industries exceeded costs and losses of the agricultural sector and related industries, see section 3.2.3.

⁶³ A standard result in economic theory, known as *Coase Theorem*, says that private markets can generate efficient outcomes in spite of public benefits. The idea is that all parties negotiate, and all parties receiving benefits consent to co-fund the activity that creates benefits. In reality however, transaction costs of decentralised negotiations would be too high, since public benefits regularly affect many farmers and other parties. Thus decentralised negotiations between individuals will not be analysed as a solution to avoid inefficient market outcomes.

⁶⁴ Public goods are characterised through non-rivalry and non-exclusiveness of their consumption. Thus public goods per definition involve public benefits, see Cornes, Richard and Todd Sandler (2001), *The Theory of Externalities, Public Goods and Club Goods*, Cambridge, pages 8-9.

The possibilities to ensure animal health through government provision of prevention and control measures are limited however. Firstly, governments neither have the financial capabilities, nor the personnel requirements to directly provide all prevention and control measures on an efficient level. Secondly, it is not very likely that centrally planned measures would meet an efficient level, particularly regarding on-farm prevention.

Therefore it can be concluded that government provision of prevention and control measures is a feasible solution regarding measures, which are to be implemented by a Community, national or state-level authority. Governments however can only provide on-farm bio-security measures selectively. To make sure that efficient prevention measures are undertaken on the farm-level, other ways of government intervention are needed.

5.3.3. Regulation

Government regulation, i.e. the determination and enforcement of legal standards instructing efficient prevention and control measures, can be a feasible way to ensure efficient on-farm bio-security. If on-farm bio-security measures can be identified which are efficient for all operators throughout the country, regulation is the appropriate government intervention to implement efficient prevention and control measures. An example is to restrict or even prohibit the use of certain feedingstuffs that may endanger public or animal health. A second example concerns farmers' duties to identify their animals, keep registers at the farm and provide information on animal movements to the national identification database (e.g. in the case of bovine animals). As previous outbreaks have shown, effective disease control requires traceability of live animals. Therefore it is likely that such requirements are in line with efficiency considerations⁶⁵ and should be regulated, since successful operation of identification and traceability systems requires all operators to participate. The challenge of a veterinary authority is to determine which measures are efficient and should therefore be a legal standard.

This points to the main weakness of regulation. It bindingly constitutes certain rules for every farm within a State or even within the Community. However there are many prevention and control measures that might be efficient on one farm but not on other farms, e.g. adapting an all-in-all-out production in pig production or applying specific disinfecting procedures. Thus regulation is an appropriate way of ensuring efficient on-farm bio-security measures for all measures that are efficient throughout the area where the legislation comes into effect. For other measures regulation can only determine minimum safety standards. Also, regulation always requires some form of control, e.g. monitoring, through the regulating authority to make sure that legal standards are met, which involves certain transaction costs.

Currently, government provision and regulation are common instruments to ensure animal health in the Member States. However, government provision and regulation are not sufficient to ensure efficient animal health management. Government provision is mainly feasible for prevention and control measures that feature a clear public responsibility, e.g. Community or MS emergency measures for controlling disease outbreaks. Regulation, i.e. the development and implementation of legal standards, can be efficient when the nature of a safety measure allows definition of an efficient standard valid for any farm in the entire state or nation where regulation applies. Efficiency of many measures has to be assessed on every single farm, however, e.g. production technology, many aspects of herd-level bio-security, etc. It is for example likely that in "intensity hot spots" higher bio-security standards are efficient than in regions with low farming intensity, because an outbreak in a hot spot

⁶⁵ Thus far, no comprehensive study on cost-effectiveness of traceability requirements for live animals is available

causes higher costs and losses since more farms would be affected from regulatory emergency measures. Efficient standards therefore need to take into account regional factors.

This leads to the following conclusion for harmonised cost-sharing schemes:

1. ***Cost-sharing schemes could promote bio-security standards that are higher than legal standards, when this is efficient.*** Also, bio-security standards which are efficient throughout a legislative territory should be regulated by the government through legislation. However, cost-sharing schemes may have to promote bio-security standards that are higher than legal standards, as efficient standards may differ between farms or regions.

5.3.4. Compulsory insurance

Compulsory insurance can result in efficient prevention standards regarding those measures that cannot be provided by governments or regulated in legislation. These are bio-security measures that have to be determined and implemented through a farmer, who takes into account particular characteristics of the farm, e.g. with respect to construction, production, environment, etc. Insurance can work as a mechanism to induce operators to determine and implement efficient on-farm bio-security standards that are beyond legal requirements and consider public benefits.

This can be illustrated as follows: consider that an organisation providing insurance would take into account public benefits of an improvement of on-farm bio-security. That means it would offer a price reduction to the farmer that reflects the reduction in total risk, i.e. the reduction of expected costs and losses of this farmer and other farmers in the regions, of related and even unrelated industries, and the benefits for public health. Such an insurance scheme would certainly induce efficient on-farm prevention and control measures, since public benefits of such measures would become an operator's benefits through the differentiation of contributions to the insurance scheme. Participation in such an insurance organisation would have to be compulsory for the operator, however. The reason is that without compulsion to participate in the insurance scheme, an operator would determine and implement safety standards which are individually optimal, i.e. maximise the individual benefit without taking into account public benefits. It is therefore an appropriate measure to compulsorily insure operators against certain animal disease risks in a cost-sharing scheme which takes into account public benefits of on-farm bio-security standards when determining the operators' contributions to the scheme⁶⁶. The need of compulsory participation is also illustrated by the existing cost-sharing schemes analysed in the previous sections. The participation in both the German and the Dutch schemes that currently provide coverage for major livestock diseases is compulsory for operators (see section 4).

This leads to the following conclusion for harmonised cost-sharing schemes:

2. ***Participation of operators in a cost-sharing scheme has to be compulsory.*** To safeguard an efficient animal health risk management some bio-security measures have to be determined and implemented through operators. A cost-sharing scheme can take into account public benefits of bio-security measures and induce efficient on-farm bio-security measures through differentiation of contributions, under the condition that participation in the system is compulsory.

⁶⁶ Kunreuther, Howard and Geoffrey Heal (2003), Interdependent Security, Journal of Risk and Uncertainty, 2003.

5.3.5. Subsidising prevention

A fourth way of government intervention to ensure efficient animal disease risk management is to subsidise prevention. Subsidising certain prevention measures changes costs of these measures from an operator's point of view. That means an operator's decision to invest in a certain bio-security measure, which depends on the operator's costs and benefits of this measure, can be influenced through subsidising it. Subsidising bio-security measures induces operators to increase bio-security standards. Hence a socially optimal, i.e. efficient level of prevention can be achieved through appropriately designing subsidisation of on-farm bio-security.

Both instruments to induce efficient prevention, differentiation of contributions in a compulsory cost-sharing scheme and subsidising certain prevention measures, could be applied by cost-sharing schemes. A bio-security measure which is already implemented by some operators in a cost-sharing scheme's territory could be rewarded through a reduction of contributions for those operators. If a cost-sharing scheme however wants to promote new prevention measures, it might be easier to induce operators to consider these measures when cost-sharing schemes offer subsidies. The reason is that subsidies reduce the initial costs of investing in a new bio-security measure, whereas a reduction of contributions to a cost-sharing scheme can only be granted after the investment is made.

This leads to the following conclusion for harmonised cost-sharing schemes:

3. ***Cost-sharing schemes could be involved in subsidising prevention measures.*** Cost-sharing schemes should be free to promote certain prevention measures, particularly new measures which are not yet implemented in their region, to induce operators to conduct efficient on-farm prevention.

5.4. Categorisation of livestock diseases

Government intervention comes at a cost. The benefit of government intervention is, in an ideal case, that animal disease risk management measures are performed on an efficient level by all parties involved, which means that the total benefits of society are maximised (of course, taking into account total costs of prevention and control measures). It is straightforward to conclude that government intervention regarding livestock safety is more justifiable, the higher public benefits of prevention and control measures are. In the following, we will address this subject and determine what it depends on whether public benefits of prevention and control measures are high or low.

The basic idea is to link the magnitude of public benefits associated with prevention and control measures to disease characteristics. This ultimately leads to a disease categorisation, which is in line with criterion I, stating that cost-sharing schemes have to take into account the public relevance of a disease. Besides that, a categorisation of animal diseases caters the need of policy makers for priorities in animal health policy. Government responsibility in animal disease risk management is often linked to disease characteristics⁶⁷. Categories obtained hence demand different levels of government intervention, i.e. government responsibilities differ according to disease characteristics.

⁶⁷ E.g. criteria for the inclusion of a disease in the list of the World Organization for Animal Health (OIE) of notifiable diseases include e.g., international spread, significant spread within naïve populations and zoonotic potential. The approach to align EU rules with OIE Standards (see "Issues for the Future" in part I of this Final Report) would therefore also have relevance for disease categorisation. The Australian "Emergency Animal Disease Response Agreement" (EADRA) categorises animal diseases into four groups according to public benefits involved with the fulfilment of EADRA measures and standards. The higher the share of public benefits, the greater is the government responsibility and funding, respectively,

5.4.1. First dimension of disease categorisation: Public relevance

Public benefits of animal disease risk management depend on the possible impacts of the diseases on public health and the wider economy. We will therefore discuss the most important factors determining the impacts of diseases on public health and the wider economy.

i) Contagiousness

The most obvious disease characteristic that determines the amount of public benefits associated with a particular disease is its *contagiousness*, i.e. the capability of an infectious agent to spread. The outbreak of a very contagious disease in one particular herd will probably affect other animals of the same herd. Furthermore, the probability that other herds in the region will be infected is high. Effective disease control may require preventive culling and imposing movement and marketing restrictions on herds in the affected region, which leads to direct losses and business interruption costs for farmers. Also related industries like the animal trade or food processing industry can incur losses. Hence the more contagious a disease is, the higher can the overall economic impact of an outbreak be. Measures that reduce the probability and/or the economic impact of an outbreak of a highly contagious disease involve large public benefits. Therefore government responsibility is very high for highly contagious diseases. A striking example is FMD which is considered as an extremely contagious disease. The virus can be air-, soil-, animal- or equipment-borne and survive for long periods in meat and non-pasteurised dairy products. The FMD-outbreak in the UK in 2001 showed the devastating consequences of this disease. It caused total losses of more than 13 billion € to the UK economy, according to government estimates (see section 3.2.3).

ii) Impact on public health

Public benefits of animal health risk management also depend on whether diseases can affect human health or not. It is one of the highest priorities for governments to ensure public health and safeguard people from threats to health and life. Thus we conclude that the *possible impact on public health* of a disease, i.e. if it poses a real threat to public health, is a disease characteristic determining public benefits associated with disease prevention, control and containment.

iii) Other important factors of disease categorisation

There may be *other disease characteristics* besides contagiousness and being a zoonosis that determine public benefits and responsibilities associated with prevention, control and containment measures for animal diseases. This includes possible impacts of the diseases on animal health/welfare, the environment and the wider economy. If a disease is notifiable according to Community/OIE rules, an outbreak may lead to additional impacts through potentially affecting trade in animals and products of animal origin.

These impacts determine the first element of disease categorisation, *public relevance*.

The public relevance of animal diseases relates to the public benefits involved with disease risk management. Extremely contagious diseases like FMD or Avian Influenza can have a very significant negative impact on human/animal health or the wider economy. Zoonotic diseases can pose a

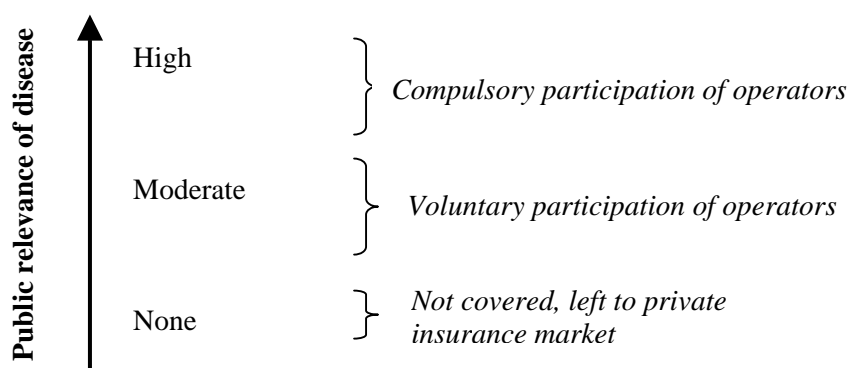
see Adams (2005), Emergency Animal Disease Response Agreement (EAD) – UK Presentation, Australian Government, Department of Agriculture, Fisheries and Forestry.

significant health threat to the population. Efficient risk management of these diseases therefore constitutes a significant public benefit. There is a public interest to cover these types of diseases in a compulsory cost-sharing scheme. Besides that, the risk of extremely contagious diseases is very difficult to cover on unregulated private insurance markets because of their loss accumulation potential⁶⁸, so that operators have little possibility to manage their related financial risk through an appropriate cover.

This leads to the following conclusion for harmonised cost-sharing schemes:

4. ***A compulsory cost-sharing scheme only needs to cover animal diseases with high public relevance.*** For some diseases there is a high responsibility for public intervention because of possible significant negative impacts on public health, animal health/welfare, the environment and the wider economy. These diseases have to be included in a cost-sharing scheme. On the other hand, other diseases require only limited public intervention. For these diseases a voluntary participation in cost-sharing scheme is possible. Finally, some diseases do not require public involvement at all and related risks should be left to private insurance markets, since there is no public interest to restrict freedom of farmers' production management decisions. Any public involvement in compensation for losses due to this type of diseases should be withdrawn.

In summary, the following categories of public relevance can be differentiated:



Depending on the criteria for disease categorisation that are to be developed it would also be possible to further differentiate the degree of public relevance/responsibility for specific diseases, which may have an influence e.g. on the amount of public contribution to disease losses (see section 5.4.4 below). However, at this stage of the analysis it is sufficient to point out the need to define precisely for which specific diseases a compulsory participation of operators is required.

5.4.2. Second dimension of disease categorisation: Need for EU coordinated action

Depending on disease characteristics, the geographic area affected by disease outbreaks differs, which implies that the area where public benefits of prevention and control measures occur differs as well. Accordingly, prevention and control efforts have to be coordinated in institutions that are the best

⁶⁸ This feature is often called systemic risk of animal disease risk, (see Meuwissen, Miranda P.M, Marcel A.P.M. van Asseldonk, Jerry R. Skees and Ruud B.M. Huirne (2006), Designing Epidemic Livestock Disease Insurance, in: The Economics of Livestock Disease Insurance, Cambridge, page 129

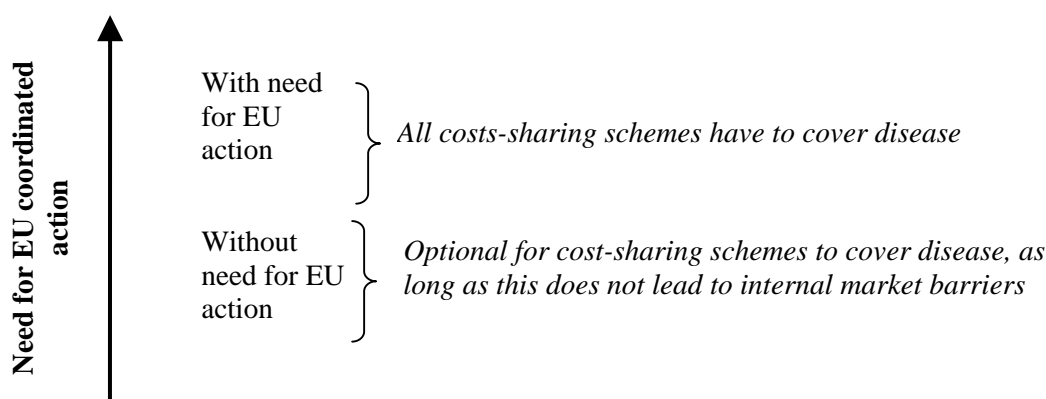
suited to cover the entire geographic area potentially affected by a disease outbreak. On the one hand, for certain diseases an outbreak could potentially have EU-wide public health and/or economic impacts or other characteristics of the disease could require EU coordinated action. On the other hand, for other diseases an outbreak would potentially only have economic and/or public health impacts that are regionally limited. In line with the principle of subsidiarity (criterion III), the responsibility for efficient risk management therefore would lie mainly with the affected government.

This ultimately leads to the categories “diseases with need for EU coordinated action” and “diseases without need for EU coordinated action” among the diseases classified as publicly relevant. While the former category implies both EU and MS responsibility for disease prevention and control, public responsibility for animal disease risk management however would have to lie at the MS-level for the latter category.

This leads to the following conclusion for harmonised cost-sharing schemes:

5. ***Disease categorisation should take into account the degree to which coordinated action at EU-level is required, or action at MS-level alone is likely to be sufficient.*** In line with the principle of subsidiarity the responsibility for coordination of disease prevention and control should lie at the lowest appropriate level.

Diseases with need for EU coordinated action would have to be included in all EU cost-sharing schemes. It has to be noted, however, that a particular disease without need for EU coordinated action could still pose a potentially large hazard to the economy and/or population of a specific Member State, i.e. could be a disease with high public relevance in that particular Member State, while it may not be categorised as publicly relevant in another Member State. These differences could arise from regional factors like climatic and other environmental conditions, prevailing farming practices, farming density, and others. Such a disease would have to be compulsorily covered in a cost-sharing scheme in the former Member State, but could in be excluded from the cost-sharing scheme in the latter Member State. If in consequence some diseases were only to be covered by cost-sharing schemes in some Member States, precautions would have to be taken that this (in line with criteria IV) does not lead to a distortion of competition and to internal market barriers. In summary, this would lead to the following categorisation:



Alternatively a fully harmonised disease categorisation⁶⁹ could be introduced that would avoid potential internal market barriers. In result all MS cost-sharing schemes would cover the same

⁶⁹ In their comments on the Working paper presented by the evaluation team on 17 March 2006, several stakeholders pointed

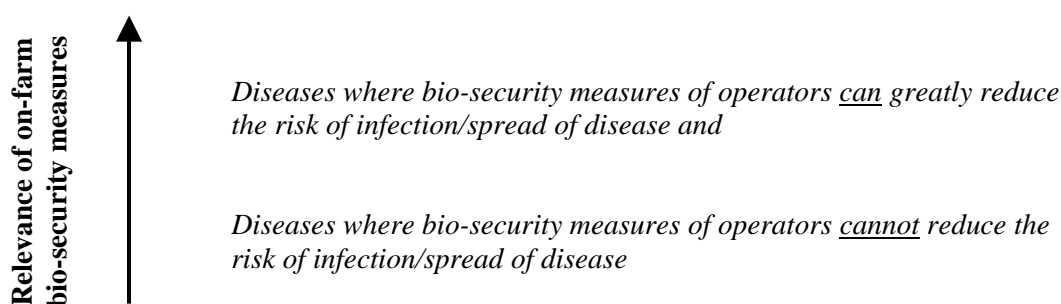
diseases. Consequently some diseases that are not publicly relevant in some Member States, would still be included in their cost-sharing schemes because they are relevant in other Member States. This would, however, not cause severe problems. Even in this situation disease categorisation would have to take into account need of EU coordinated action of a disease, as this could affect the priorities for EU intervention and possibly also the rate of EU co-financing (see section 5.7 below).

It has to be emphasized that a full harmonisation regarding disease categorisation would not change the fact that cost-sharing schemes have to be regionally oriented, since their task to ensure efficient animal disease risk management may involve different approaches, programs and priorities with regards to prevention and control of different diseases, depending on regional factors. Regional orientation does not necessarily restrict the geographic scope of a cost-sharing scheme to a small area. It is e.g. possible that one scheme is established for several smaller MS, provided that regional factors determining efficient animal health risk management measures are taken into account and a common approach for implementation can be identified. This is also in line with the required flexibility of implementation of cost-sharing schemes (see criterion VI). This leads to the following conclusion for harmonised cost-sharing schemes:

6. ***Cost-sharing schemes have to be regionally oriented.*** Disease risk differs between regions in the Community. A cost-sharing scheme designed to efficiently manage animal disease risk should therefore be regionally oriented.

5.4.3. Third dimension of disease categorisation: Relevance of on-farm bio-security measures

There may be animal diseases included in a cost-sharing scheme that can be efficiently managed through government provision of prevention and control measures and regulation. This is the case when operators, provided they comply with legal standards, have no influence on risk. An example for such a disease is BSE in the current stage of control. On-farm prevention measures cannot reduce the probability of a BSE outbreak. However the risk of other animal diseases included in a cost-sharing scheme can in many cases significantly be influenced by on-farm bio-security measures of operators, e.g. in the case of Brucellosis. Whether a farmer can influence the risk of certain diseases or not makes a great difference for the analysis of insurance functions of a cost-sharing scheme. Therefore cost-sharing schemes have to distinguish between:



to the need for EU-wide harmonised disease categories. Others thought that it would be sufficient to have harmonised criteria for categorisation.

Whether or not an operator can influence the spread of disease is relevant for the compensation rules that need to be applied by the cost-sharing schemes (see section 5.5.3, below).

5.4.4. Towards harmonised disease categorisation

Disease categorisation may also be relevant for other purposes, such as the setting of priorities for eradication programmes. For example, DG SANCO has already prepared a set of priorities for 2006 regarding animal disease eradication, control and monitoring programmes⁷⁰, which differentiates between the following categories:

- Category I: Animal diseases with an impact on public health.
- Category II: Diseases on former list A of the OIE or with vertical control Community legislation in force (AHS, ASF, FMD, AI, Bluetongue, CSF, NCD, certain fish diseases, certain mollusc diseases, and certain further exotic diseases).
- Category III: Other diseases.

On the other hand, an Animal Health Priority Score Card developed in the framework of the Strategic Research Agenda for the European Technology Platform for Global Animal Health includes the following aspects:

- Diseases incidence likelihood/probability
- Clinical disease impact on production
- Risk of zoonosis
- Risk of emergence
- Monospecies affliction
- Feral/wildlife animal reservoir
- Food safety impact
- Impact on domestic/EU community trade
- Impact on international trade
- Economic impact
- Ecological consequences
- Likelihood of collateral damage (i.e. trade, tourism)
- Status in other countries (prevalence/spread)
- Poverty alleviation / benefit for developing world

This overview illustrates that several of the dimensions for disease categorisation analysed in this study are also reflected in existing EU disease categorisation efforts. It could therefore be considered to draw on existing disease categorisations and develop them further to provide a basis for an EU wide disease classification that can serve different purposes. This would need to be subject to a separate assessment, e.g. in the framework of a full-scale feasibility study on cost-sharing schemes. Advantages of a *comprehensive EU disease categorisation system* would be:

- Making it easier to set priorities for eradication and prevention programmes;
- Creating clarity for which diseases a compulsory participation of operators in a cost-sharing scheme is required;

⁷⁰ See part I of the Final Report

- Allowing more flexibility, e.g. regarding the level of EU co-financing, which could e.g. be linked the need for EU coordinated action;
- Making it possible to align total public financial support with the degree of responsibility operators or governments have for disease prevention and control.

As basis for discussion, a categorisation scheme has been developed to combine the dimensions of disease categorisation discussed in the previous sections (see Annex 5).

Next to a harmonised categorisation system there would be a need for an *institutional mechanism* at EU level to actually categorise the diseases and to regularly review categorisation. Epidemic risk of particular animal diseases is not constant over time. Factors determining the public relevance of a disease, e.g. general hygienic and bio-security standards on farms, are improving. Furthermore production methods are changing⁷¹. Diseases have been successfully eradicated in the past; other diseases that never played a role emerge and become a serious threat to public health or the economy. Hence disease classification is not a singular task but rather a permanent process, which has to take into account new information with respect to disease characteristics as soon as it is available. Public relevance should be generally assigned to emerging diseases in order to give them special attention in animal disease risk management. Also a general possibility for an emergency inclusion of emerging diseases could be foreseen to allow for immediate EU-wide attention and reaction on emerging diseases at any point in time.

5.5. Insurance function of a cost-sharing scheme

Livestock diseases are a major risk for operators. This risk is to some extent stochastic, i.e. is subject to random (if at this level of analysis the impact of prevention measures is not taken into account). From an operator's point of view, the realisation of animal disease risk means costs and losses of disease outbreaks. Therefore the income of an operator is stochastic, too. It depends, among other things, on the realisation of animal disease risk. In good years, it could be the case that no disease outbreak occurs in a farmer's herd or nearby, and costs and losses of animal disease risk are zero in that year. In a very bad year, there is an outbreak in the farmer's herd or nearby, which is followed by emergency or preventive culling and months of movement and marketing restrictions because the outbreak cannot be brought under control. Costs and losses of animal disease risk are very high in that year and can even bankrupt the operator. There are a lot of scenarios conceivable regarding the realisation of animal disease risk for a particular operator. Each of these scenarios is completely described by a certain amount of costs and losses, and each scenario has a certain probability⁷². This is the technical description of the operator's animal disease risk. When we multiply the costs and losses of each scenario with the probability for this scenario, and sum up over all scenarios, we obtain the operator's expected value of costs and losses of animal disease risk.

Economic theory provides a clear answer to the question of what a person should do whose assets and income are at risk: It is welfare enhancing for this person to completely insure that risk, provided that

⁷¹ Milk pasteurisation, for example, was a step that drastically reduced human incidences caused by Bovine Tuberculosis in developed countries, see Cosivi, O., J.M. Grange, C.J. Daborn, M.C. Raviglione, T. Fujikura, D. Cousins, R.A. Robinson, H.F.A.K. Huchzermeyer, I. De Kantor and F.-X. Meslin (1998): Zoonotic Tuberculosis due to *Mycobacterium bovis* in Developing Countries, *Emerging Infectious Diseases*, Vol. 4, No. 1 (1998).

⁷² It may be possible to imagine all scenarios, but it is hard to find out the corresponding probabilities.

there is an organisation which does not care about risk and therefore would cover it for a consideration (i.e. insurance premium) that amounts to the expected value of risk or a little more to make up for the costs of administration⁷³. Any type of cost-sharing scheme that transfers this risk away from operators is therefore welfare enhancing for operators.

The operation of a cost-sharing scheme involves collecting contributions from operators and compensating operators' costs and losses due to disease outbreaks, besides ancillary responsibilities like investment of capital and administration. The purpose of collecting contributions is not only financing compensation payments. As has been shown in section 5.2, a cost-sharing scheme has to provide incentives for efficient on-farm prevention, as legal safety standards and government provision of prevention and control measures are not always sufficient to ensure efficient animal health risk management. This is especially important for diseases where bio-security measures of operators can influence disease-risk (see previous section). In the following section rules for assessing contributions and paying compensations will be developed that would have to apply for this category of diseases in an efficient cost-sharing scheme. Finally, we will turn to contribution and compensation rules regarding diseases that cannot be influenced through on-farm bio-security measures of operators.

Before discussing how contributions should be assessed and how compensation should be paid, it is useful to clearly define what is meant by costs and losses of disease outbreaks. These are principally costs and losses accruing to operators due to the outbreak of an animal disease⁷⁴, which we call *disease outbreak losses*. The following table gives an overview of an operator's animal health risk, i.e. of costs and losses accruing to an operator due to an outbreak of an animal disease.

Table 17: Operator's animal disease risk

Cost/Loss category	Description
<i>Disease outbreak losses</i> <i>(directly caused by restrictions imposed by veterinary authorities)</i>	Stamping-out of infected herds
	Pre-emptive slaughter of contact herds, welfare slaughter
	Partial loss of animal value due to control measures like compulsory emergency vaccination or moving or marketing restriction causing exceeded maturity for slaughter
	Costs of slaughter and rendering, disinfection and other direct disease control costs
	Business interruption costs and additional expenses directly related to established restriction zones
<i>Price risks</i>	Partial loss in animal value due to price decreases on markets caused by disease outbreaks and/or higher replacement costs

⁷³ We will refrain from administration costs here. Administration costs or, more general, transaction costs of risk transfer will play a role when the options for the institutional set-up of a cost-sharing scheme are presented.

⁷⁴ The question of who is an operator points to the vertical scope of a cost-sharing scheme, i.e. who has to participate. We restrict our analysis to operators in animal production. However a cost-sharing scheme could be expanded to related industries as well.

Disease outbreak losses directly depend on restrictions imposed by veterinary authorities. They only accrue to operators in regions directly affected by disease outbreaks, i.e. operators located in a restriction zone. Price risks can however accrue to operators located far away from the origin of an outbreak. Our analysis will initially consider disease outbreak losses only. Issues regarding the coverage of price risks will be discussed at the end of this chapter. For reasons of analytical simplicity we assume in this section that a cost-sharing scheme is not subsidised by governments, i.e. that operators ultimately have to pay through their contributions costs and losses of disease outbreaks. In section 5.7, ways to introduce subsidies into a cost-sharing scheme will be presented.

5.5.1. Contributions to a cost-sharing scheme

5.5.1.1. General risk-adjustment

Starting point of the analysis is the understanding that a cost-sharing scheme demands the expected value of the risk it covers from an operator⁷⁵. That means, contributions basically have to be adjusted to risk. To determine risk-adjusted contributions, *risk characteristics* have to be defined. After considering stakeholder comments on risk adjusted contributions and taking into account the experience of existing compensation schemes, three elements of risk characteristics seem to be practicable:

- Number of animals;
- Animal types;
- Regional risk adjustment.

An unambiguous characteristic of an operator's risk is the *number of animals* in the herd. A herd of 100 cattle certainly constitutes a different risk compared to a herd of 50 cattle. All other things being equal, it will be twice as high. Hence an operator's contribution to a cost-sharing scheme has to be proportional to the operator's the number of animals.

A second risk characteristic is the species of animals covered. It is easy to understand that the risk of 100 cattle is higher than the risk of 100 hens, just because the animal values differ extremely. Furthermore the probabilities of contracting diseases depend on species as well, since many animal diseases are species-specific. Within one species, the probabilities of contracting diseases are quite similar, but animal values can differ strongly, e.g. between a piglet, a sow and a fattening pig. It is therefore useful to define *animal types* for each species to approximate animal value. Within one species, animal types could be differentiated according to age groups and/or usage, weight, additions for pregnancy and/or high quality, when animal values strongly depend on these factors. Animal types

⁷⁵ The assumption that the cost-sharing scheme does not care about risk, the disregard of administration costs and the decision to exclude systematic subsidies from the analysis justifies use of the expected value of an operator's animal disease risk as a standard for contribution. This implies zero expected profits for the risk-taking organisation however, i.e. is not a feasible assumption in all institutional arrangements for implementation of a cost-sharing scheme. This aspect will be addressed in the next section, when options regarding the institutional arrangement of a cost-sharing scheme are presented.

could for example be fattening pigs < 40 kg, fattening pigs 40 - 55 kg, fattening pigs 55 - 75 kg, and fattening pigs > 75 kg⁷⁶.

As contributions have to be risk-adjusted, an operator would have to submit the number of each type of animals covered to the cost-sharing scheme. A cost-sharing scheme would then have a good view of the operator's animal value covered under the scheme, and would be able to determine a risk-adjusted contribution. The exact definition of animal types has to be determined by the cost-sharing scheme. The more types for every species are established, the more exactly a cost-sharing scheme will be informed about risk. However, an increasing number of types increases transaction costs of a cost-sharing scheme, since it requires more frequent updates of an operator's stock of animals to be covered under the scheme. It would be advantageous that the operator submits types and numbers of animals at the beginning of the period of coverage to the cost-sharing scheme for the assessment of contributions to avoid un-justified compensation⁷⁷ and reduce the possibilities of fraud on compensation payments⁷⁸. If updated on a regular basis, the cost-sharing scheme would have a database to calculate compensation payments once an outbreak occurs. This would not only support the rapidity of response of a cost-sharing scheme, but also reduce the reliance on ex-post animal valuations. Both aspects can improve the effectiveness and rapidity of intervention of a cost-sharing scheme (see criterion VI).

A third risk characteristic which has a significant influence on animal disease risk is regional herd density. Even if one considers the risk of infection as similar in a high density area as in a low density area, the possible losses (and therefore the risk) increase with herd density. This is illustrated by the following example: consider a high density region with a distance of 1 km between every farm and a low density region with a distance of 12 km between every farm. In case of an FMD outbreak, a protection zone (radius of 3 km) would be established. Being located in such a protection zone is costly to operators, e.g. because of movement and marketing restrictions. In the low density region, no other farm would be affected, but in the high density region more than 20 farms would be located in the protection zone, incurring losses due to marketing and movement restrictions. Hence herd density in an operator's region is a significant characteristic of the operator's animal disease risk⁷⁹, i.e. of the costs and losses accruing to him due to disease outbreaks. A *Regional risk adjustment* can be achieved by matching the sum of past compensation payments in a specific region or district with the sum of contributions of the farmers from that specific region or district in the same period⁸⁰.

⁷⁶ The examples given here are mainly inspired by the rules for value assessment of the German *Tierseuchenkassen*

⁷⁷ The Court of Auditors' Special Report No 1/2000 on the CSF-outbreak 1997/98 showed that the missing availability of data regarding operators' stocks of animal types results in fraud, see paragraphs 54 and 59.

⁷⁸ If animal types are not determined at the beginning of the period of coverage, they could be redefined after an outbreak, e.g. the redefinition of fattening pigs into gilt when compensation for gilts is higher, see Court of Auditors' Special Report No 1/2000, paragraph 61.

⁷⁹ In their feedback on the workshop regarding this pre-feasibility study of cost-sharing schemes, the Dutch Ministry of Agriculture criticised herd density as a risk characteristic because farmers cannot influence it. This may be true, as far as one may believe that the decision to locate in a certain region is not up the farmers due to sunk costs of farm investment. However it is not important whether farmers can influence risk characteristics or not. As soon as risk characteristics can be clearly identified, they have to be taken into account for the assessment of contributions. The reason is that otherwise high risk areas will be subsidised by low risk areas, which distorts competition.

⁸⁰ This has been applied in the German *Tierseuchenkassen* system

The analysis of risk-adjustment of contributions implies that cost-sharing schemes have to operate separate funds for different species, since risks are species-specific. Furthermore separate funds are necessary to prevent cross-financing of risks of different sectors, i.e. to prevent distortion of competition (see criterion IV). If, for example, an outbreak of avian influenza would lead to an increase of contributions of pig breeders, this would seriously undermine the credibility of the system.

Finally, contributions of an individual operator may also be dependent on the level to which an operator receives flat-rate compensation for business interruption losses in case of veterinary restrictions imposed on him (see section 5.5.2.5 below). This leads to the following conclusion for harmonised cost-sharing schemes:

7. ***Contributions of operators to a cost-sharing scheme have to reflect their individual risks.*** Practicable criteria to determine individual risks include *number of animals, types of animals* and a *regional risk adjustment* to differentiate contributions within the territory of a cost-sharing scheme.

5.5.1.2. Reduction of contribution through *safety bonuses*

Our reasoning for recommending compulsory participation in a cost-sharing scheme for specific diseases was that a cost-sharing scheme can induce efficient on-farm prevention through a differentiation of contributions, as far as efficient prevention and control measures can not be generally determined and implemented through legal standards and control of compliance with these legal standards. Hence the contribution structure of a cost-sharing scheme has to reflect public benefits associated with on-farm prevention measures that exceed legal standards and significantly reduce the risk of contracting a disease. It is already difficult to assess the effect of an operator's additional bio-security measure on the probability of the operator's own herd contracting a disease. It seems to be even more difficult to assess the reduction in overall animal disease risk, i.e. to estimate the probability reduction of other farms contracting a disease which would have spread from that particular farm whose operator has implemented the additional bio-security measure. Therefore we propose to reward additional bio-security measures through safety bonuses (i.e. premium reductions). It should be up to the cost-sharing scheme which additional bio-security measures it rewards. For some regions, animal transports may pose a great risk of infection⁸¹. Hence the regionally operating cost-sharing scheme should reward operators who have a vertically integrated production that requires few animal transports compared to others. Another cost-sharing scheme may have found out that an all-in-all-out pig production greatly reduces animal disease risk in its territory. Hence it should provide a safety bonus for all operators applying all-in-all-out production.

It is generally up to the cost-sharing scheme to determine a safety bonus scheme, i.e. to determine for what measures a reduction of the contribution is granted, and the amount of the reduction, which could be defined as a percentage of the initial risk-adjusted contribution. The development of a bonus scheme should be seen as a dynamic process. As soon as new information regarding the effectiveness of bio-security measures come up, cost-sharing schemes should adjust their contribution structure to provide appropriate incentives. However the decision to implement these measures should be up to the operators⁸². If farmers decide to draw on the safety bonus and implement the additional prevention

⁸¹ The Court of Auditors sees a strong correlation between animal movements and the risk of disease spreading, see the Special Report No. 1/2000, paragraph 7

⁸² A safety bonus for all-in-all-out production may induce some farmers to adapt this production type. For other farmers, it may not be efficient to adapt all-in-all-out production, because of constructional features of their premises. It is not efficient

measure, coverage of costs and losses should be conditioned upon the implementation of the additional prevention measure.

This leads to the following conclusion for harmonised cost-sharing schemes:

8. ***Cost-sharing schemes should provide incentives for additional bio-security measures through safety bonuses.*** Incentives for prevention measures that reduce risk should be given through reductions of contributions conditioned on the implementation of these prevention measures.

5.5.1.3. Reduction of contribution through disease-free bonuses

The instruments presented so far to ensure efficient on-farm animal disease risk management are direct provision of prevention and control measures through governments⁸³, legal standards⁸⁴, subsidisation of prevention measures and differentiation of contributions in a compulsory cost-sharing scheme. Most of these instruments are useful to ensure on-farm bio-security, but an indispensable precondition for them to be applicable is that they are observable (and verifiable) through a cost-sharing scheme at reasonable cost. However not every on-farm bio-security measure fulfils this precondition. Continuous monitoring of on-farm hygiene would be very expensive and might also be an unacceptable intrusion in the affairs of the farmers. Compliance might be observable and verifiable ex-post, but once an outbreak occurred, the damage is already done. Therefore we propose to include a disease-free bonus into the contribution scheme to provide additional incentives for bio-security measures (so-called unobservable bio-security measures⁸⁵). This bonus should be granted as soon as there were no disease-outbreaks in a certain period of time, e.g. one year, and it should increase with an increasing time period of disease-freeness. However, once a disease outbreak occurs on this farm, the bonus should be cut immediately. The exact determination of a disease-free bonus scheme should be up to a cost-sharing scheme.

Incentive Compatibility

Insurance is beneficial for an operator whose assets or income is at risk. However, if risk is not purely stochastic, but depends on the behaviour of the operator to some extent, insurance creates problems. The fact that losses will be compensated reduces the operator's incentives to conduct (costly) risk-reducing behaviour (so called *moral hazard*). If this behaviour is not observable and verifiable, it cannot be avoided through conditioning the contract upon risk-reducing behaviour. It results in inefficient prevention measures.

The solution to this problem is to ensure incentive compatibility in an insurance contract, i.e. the insurance contract has to provide incentives for on-farm safety. Therefore the operator may not be insured completely, part of the risk has to remain with him. In practice, this can be achieved through integrating a deductible, a co-insurance rate, a risk-free bonus or a partly reimbursement of contributions in case of disease-freeness in the insurance contract.

for them to adapt all-in-all-out. Thus it would not be efficient to determine all-in-all-out production as a legal standard. But through a well-rated reduction of contributions, efficient adaptation of all-in-all-out production can be reached.

⁸³ Regarding on-farm prevention and control measures, this instrument is mainly applicable for emergency measures following a disease outbreak

⁸⁴ This instrument is applicable for prevention and control measures which are efficient throughout a legislative territory

⁸⁵ See Winter, Ralph A. (2000), Optimal Insurance under Moral Hazard, in: Georges Dionne (editor), Handbook of Insurance, Philadelphia, 155-187 for an economic model regarding moral hazard in insurance relationships

This leads to the following conclusion for harmonised cost-sharing schemes:

9. ***Cost-sharing schemes should provide additional incentives for bio-security measures through disease-free bonuses.*** Prevention measures are often not perfectly observable and/or verifiable. A disease-free bonus which reduces contributions to a cost-sharing scheme should be established to provide additional incentives for bio-security.

It has to be pointed out that a disease-free bonus could run counter to the need for early disclosure of disease-outbreaks. This problem, and how it can be solved, will be addressed later when incentives for early disclosure are going to be introduced (see section 5.5.2.3).

5.5.2. Compensation of operators by a cost-sharing scheme

5.5.2.1. General compensation rule

One of the basic functions of a cost-sharing scheme is to compensate losses. Table 17 (above) provided a short overview of which losses accrue to operators due to a disease outbreak. For the time being we exclude losses from price risk and solely concentrate on disease outbreak losses. The welfare improvements of insurance are not limited to certain sub-categories of costs and losses. In order to realise as much welfare gains as possible for operators, a cost-sharing scheme should cover costs and losses as completely as feasible. Existing compensation schemes mainly indemnify direct losses such as the value of compulsory, pre-emptively and welfare slaughtered animals and organisational costs related to these slaughters. Other disease outbreak losses such as business interruption costs directly related to regulatory measures (e.g. movement restrictions) are often not covered. In some countries private insurance covers consequential losses, but in most countries the market is not well developed and/or demand is low. In summary, existing schemes in the EU provide coverage against total losses in animal value, but in particular costs and losses related to restriction zones are not sufficiently covered (if one does not take into account exceptional market support measures, which are basically ad-hoc measures with all related disadvantages, see section 3.3).

On the one hand, such a compensation system is inefficient with respect to risk transfer, since costs and losses due to restriction zones can amount to a significant part of an operator's total losses⁸⁶. On the other hand, these compensation schemes bear adverse incentives. A farmer with an infected herd could be better off than a farmer with a healthy herd that is by chance located in a restriction zone for a longer period. In the latter case, the farmer incurs costs from movement and marketing restriction, which may not be indemnified at all. In the former case, the operator's herd may have to be slaughtered, and the operator gets indemnified according to animal values. It is straightforward to see that this type of compensation system does not provide additional incentives to prevent a herd from contracting a disease that broke out nearby. But efficient control of disease outbreaks requires categorical support of all operators, which is much easier to obtain when it is clearly in their economic interest to prevent a further spread of the disease. Hence cost-sharing schemes that aim to provide significant risk transfer from farmers to cost-sharing organisations and to provide incentives for efficient risk management have to base compensation payments on the sum of all disease outbreak losses.

⁸⁶ See Gramig (2006), page 44

This leads to the following conclusion for harmonised cost-sharing schemes:

10. ***A cost-sharing scheme has to cover all disease outbreak losses of operators directly affected by veterinary measures (except price risks) to avoid providing adverse incentives and to ensure efficient risk transfer.*** This includes total and partial losses in animal value as a direct consequence of veterinary measures (e.g. caused by compulsory slaughtering, emergency vaccination), as well as other costs of operators due to such measures (e.g. costs of slaughter, disinfection, business interruption).

5.5.2.2. Compensation for total or partial losses of animal value

Efficient risk transfer requires full compensation of losses. The loss of a compulsory, pre-emptive or welfare slaughtered animal is the animal value at the time of slaughter, i.e. the regional market price of the animal. Hence compensation for compulsory, pre-emptive and welfare slaughtered animals should match regional market prices for the animals at the time of slaughter as much as possible. Similar to the requirement of assessing contributions, animal types have to be defined, and their value determines compensation. Therefore a cost-sharing scheme permanently has to monitor or have available from other sources regional market prices for each animal type⁸⁷.

If it is the case that marketing restrictions apply to the entire region, and regional market prices are not available at the time of slaughter, the cost-sharing scheme could use market prices of nearby regions and adjust these prices according to normally prevailing price differences between these regions. Only if the entire territory of the cost-sharing scheme is affected by marketing restrictions and reasonable market prices cannot be estimated, a long-term average animal value could be used to calculate compensation payments. It is necessary that cost-sharing schemes monitor livestock prices to avoid uncertainty about compensation payments and ensure rapid response of a cost-sharing scheme (see criterion VI).

This loss assessment rule applies to total losses of animal value due to compulsory, pre-emptive and welfare slaughtering. Also losses from a drop in value due to regulatory measures (e.g. resulting from emergency vaccination) can be assessed according to market prices at the time the measure is applied. Using pre-crisis market values of animals as basis for compensation has significant disadvantages. When market prices fall significantly after the establishment of a restriction zone, operators with infected herds would again be better off than operators with healthy herds, in case animal values are indemnified according to pre-crisis animal values, i.e. compensation would involve adverse incentives. However, to prevent speculative price movements pre-crisis market values could be used as a cap for compensation. Should prices move to higher levels as a consequence of a disease outbreak, compensation payments would be limited to the pre-crisis value.

This leads to the following conclusion for harmonised cost-sharing schemes:

11. ***Losses of animal value have to be indemnified according to market prices at the time of slaughter.*** To guarantee swift compensation and avoid adverse incentives, cost-sharing schemes have to follow or deduce regional market prices for all animal types covered. To prevent speculative price movements pre-crisis market values could be used as a cap for compensation, whenever market prices move up after an disease outbreak.

⁸⁷ It is possible to define animal values for certain types as a constant fraction or multiple of other types if the former type usually is not traded on markets.

5.5.2.3. Compensation for slaughter of infected herds

A key issue of reducing the economic impact of disease outbreaks is to commence emergency measures as soon as possible after an outbreak occurs. That requires first of all that operators are aware of animal disease risk and therefore regularly check their herds for disease symptoms. When operators discover symptoms, it is crucial that they immediately notify the veterinary authority in charge (“early disclosure”).

As it is the case with respect to many prevention measures, early disclosure is not perfectly observable and verifiable, which means that an additional incentive for early disclosure would be useful. The share of diseased animals in a herd however, i.e. the prevalence-rate, can serve as a signal for the time-lag between the time when first symptoms could have been detected and the time of reporting. A prevalence-rate dependent compensation for infected herds means that a higher prevalence rate (higher number of infected animals) implies a lower compensation payment. This provides incentives for early disclosure. An example for such a system provides the Dutch Animal Health Fund, which generally compensates only 50% of the value of visibly diseased animals, dead animals at the time of inspection by the official veterinarian are not compensated at all. Animals that become diseased or die after the outbreak is reported to the authorities are compensated fully.

Prevalence rate-dependent compensation rules have to be carefully designed. This is particularly true when the cost-sharing scheme involves a disease-free bonus as recommended above. An adverse incentive could result to not report an outbreak in order to save the disease-free bonus, if there is a perceived chance that an infection of the herd could be concealed and only affects a limited number of animals. In order to avoid this adverse incentive, an operator’s disease-free bonus should not be forfeited when the operator reports a disease before a restriction zone is established that includes the operator’s premises. This rule provides incentives for prevention and for early disclosure. If an outbreak occurs, it is always optimal from an economic perspective for an operator to notify it to the authority as soon as possible, regardless whether the operator’s farm is the origin of the disease outbreak.

A possible guideline regarding the design of the prevalence rate-dependency of compensation could be conceived as follows. An *acceptable rate of visibly diseased animals* has to be defined, which indicates that the operator disclosed early, i.e. regularly checked the animals with respect to disease symptoms and disclosed immediately. If the prevalence rate at the time of notification is not higher than the acceptable rate of visibly diseased animals, losses should be compensated completely. Compensation payments should be significantly reduced when the prevalence rate at the time of reporting exceeds the acceptable rate of visibly diseased animals. The asset of the Dutch system of prevalence rate-dependency of compensation payments is its simplicity. It however may lead to a reduced compensation even though the operator disclosed early; as is especially the case for diseases with a high mortality rate in a very short time span, such as Avian Influenza.

An *acceptable rate of visibly diseased animals* would have to be defined separately for every disease covered under the cost-sharing scheme. The rate depends on the unambiguousness of disease symptoms, on the contagiousness, length of the incubation period, and probably other factors. Definition of these rates could be developed at EU-level and applied in a harmonised way throughout all MS cost-sharing schemes. Regarding the assessment of prevalence rates in case of an outbreak, the time-lag between notification of the disease and veterinary examination has to be taken into account.

This leads to the following conclusion for harmonised cost-sharing schemes:

12. ***Compensation payments for total losses due to emergency slaughter of infected herds have to depend on the prevalence-rate of the disease.*** This compensation rule provides incentives for early disclosure of disease outbreaks. Disease-outbreaks should not forfeit an operator's disease-free bonus provided that the operator notifies the authority before a restriction zone is established including the operator's premises.

The prevalence rate-dependency of compensation payments is not supposed to substitute legal standards for early disclosure. It provides an additional incentive, which is helpful because early disclosure is not perfectly observable and verifiable. The mere existence of prevalence rate-dependent compensation is expected to induce operators to be even more careful regarding their herd's health status and to notify immediately when disease symptoms are observable. Furthermore a prevalence rate-dependent compensation provides incentives for other loss-reducing measures after disease outbreak, e.g. immediate separation of animals showing disease symptoms from apparently healthy animals.

5.5.2.4. Compensation for direct disease control costs

Costs of slaughter, rendering and on-farm disease control measures like disinfection could be directly provided and funded by governments or, alternatively, can be reimbursed completely through a cost-sharing scheme. However, experience with past outbreaks has demonstrated that costs for such measures tend to increase extremely in crisis situations and cost sharing schemes could agree on flat-rate compensation based on specific indicators (e.g. number of affected animals) with providers of such services before disease outbreaks, i.e. in "peace times".

This leads to the following conclusion for harmonised cost-sharing schemes:

13. ***Direct disease control costs of operators such as disinfection costs could be compensated completely.*** These types of losses could be fully indemnified in a cost-sharing scheme that aims at providing the highest possible risk transfer to farmers, preferably according to pre-determined flat rates to reduce the risk of inflated prices during crisis situations.

5.5.2.5. Compensation for business interruption losses

Business interruption losses and other costs related to regulatory restrictions may be rather difficult to quantify, as they often manifest in additional work or opportunity costs. How costly certain restrictions are often depends on production characteristics of a farm. A pig farm specialising in fattening pigs may not be affected by a breeding prohibition as much as a farm specialising in producing piglets. Compensation for these costs and losses could be individually agreed upon between cost-sharing scheme and operators to reflect the different exposure of operators to different regulatory restrictions. In line with existing cost-sharing schemes (e.g. in France), these can be indemnified through daily rates for the time period when restrictions are in place. These rates have to be negotiated ex-ante because they certainly affect risk-adjusted contributions.

This leads to the following conclusion for harmonised cost-sharing schemes:

14. ***Business interruption losses and other costs directly related to regulatory restrictions could be indemnified on the basis of daily flat rates.*** Rates could be negotiated between operators and the cost-sharing scheme to be adjusted in line with the operators' needs (with higher flat rates implying higher contributions of the operator to the scheme).

5.5.3. Disease risk that can not be influenced through on-farm prevention

In section 5.4.3, we have distinguished between diseases whose risk can or cannot be influenced through on-farm prevention measures exceeding legal standards. The analysis up to now referred to the case when additional bio-security measures make a difference. In this case financial flows have to provide appropriate incentives through a safety bonus and a disease-free bonus. For diseases where risk can not be influenced through on-farm bio-security measures that exceed legal standards, these mechanisms are not necessary. Therefore we recommend to fully compensating costs and losses from diseases where operators cannot influence the spread of disease in case they comply with legal standards. However, as early disclosure of all diseases is desired, compensation for total losses of infected herds should remain dependent on the prevalence rate.

This leads to the following conclusion for harmonised cost-sharing schemes:

15. ***Contributions for costs and losses from diseases where the risk of infection is independent from bio-security measures of operators should not depend on disease-freeness and safety bonuses.*** Incentives for efficient on-farm prevention are not needed since prevention measures do not make a difference for managing the risk of these diseases.

5.5.4. Price risks

Until now price risks have been excluded from the analysis. Price risk of animal diseases manifests in additional costs of replacing slaughtered animals after disease outbreaks, and in losses for operators whose animals decrease in value due to a disease outbreak, but not directly due to veterinary restrictions following the disease outbreak (such as emergency vaccination etc.). If a cost-sharing scheme were to cover the price risks of operators under veterinary restrictions, it would be possible that operators whose herds were infected or located in a restriction zone could be better off than other operators not under veterinary restrictions. The reason for this is that price movements do not stop at the borders of restriction zones, they also affect other regions or even nations. An appropriate coverage of price risks in a cost-sharing scheme that avoids adverse incentives would therefore have to involve compensation for all farmers affected by outbreak-related price movements. In such an event the financial commitment of cost-sharing schemes covering price risk would potentially be greatly increased and could become uncontrollable.

Therefore it is recommended to exclude price risks from the costs and losses covered by cost-sharing schemes. Operators would have to use other options to manage price risks that can also originate from many other factors except animal diseases. Alternatives to cover animal products' price risks are financial derivatives like futures and options, private insurance solutions or public market support measures. Efforts are required to develop an appropriate solution. One of the options is to develop "safety-nets", e.g. through developing adequate insurance markets, as has been suggested in the 2005 Communication from the Commission to the Council on risk and crisis management in agriculture.⁸⁸ The participation of operators in a safety net can be voluntary, because it is a management decision that only affects the operator, unlike on-farm prevention induced through compulsory participation in a cost-sharing scheme. Whatever solution is chosen for managing price risks, compensation mechanisms for price risks should not be related to cost-sharing schemes for disease outbreak losses. For the further analysis, we have assumed that price risks are not covered and that disease outbreak losses are exclusively covered by the cost-sharing schemes that are the subject of this pre-feasibility

⁸⁸ COM(2005) 74 final of 09.03.2005, Communication on risk and crisis management in agriculture

study. This implies that all public financial support for the latter category of losses is provided to operators through the cost sharing schemes (in line with section 5.7, below).

5.5.5. Inclusion of parties other than professional livestock producers

It would be generally possible to include other parties besides livestock producers into a compulsory cost-sharing scheme. As far as they pay risk-adjusted contributions, this should not be a problem for any other party involved. An inclusion could even be useful to ensure efficient animal disease management, if third parties influence disease risk, e.g. the animal trade industry⁸⁹. The benefits of an inclusion would be to have an additional instrument to influence the risk management activities of related industries on the one hand, namely the provision of incentives for risk reducing measures through a differentiation of contributions. On the other hand, it may be beneficial to have a more integrated approach of managing animal disease risk in livestock production together with related industries. Other instruments of government intervention into risk management of related industries, i.e. government provision of prevention and control measures, regulation and subsidization of certain activities, persist independently of the inclusion of these industries in a cost-sharing scheme. The decision to include related industries could be based on a valuation of the expected benefits of the inclusion and consultation with the relevant stakeholders.

Non-economic operators like small-scale hobby livestock holders also play a role in animal disease risk management, since their behavior can significantly influence the risk of a disease outbreak and/or spread in a region. Unlike professional livestock producers, the risk transfer-function of a cost-sharing scheme is not important since income and assets of hobby livestock holders do not crucially depend on animal disease risk. Furthermore the incentives for efficient risk management provided through a differentiation of contributions in a cost-sharing scheme with compulsory participation of operators may not effectively influence behavior of operators that do not primarily decide according to costs and benefits of decisions regarding livestock keeping. Hence the inclusion of small-scale hobby farmers in a cost-sharing scheme does not effectively increase the opportunities to improve efficient animal disease risk management. However, existing cost-sharing schemes such as the Dutch and German schemes have decided to also compensate hobby livestock holders that have to pay contributions themselves in the German system, but not in the Dutch system. The reason is that a mechanism to provide compensation for the animal value is a necessity for rapid implementation of veterinary measures such as culling in case of disease outbreaks. Therefore, if hobby livestock holders are not to be included in a cost-sharing mechanism, other mechanisms for compensation of animal value would have to be developed, which may not be an efficient way to proceed, although on the other hand the inclusion of hobby livestock holders in a cost-sharing scheme could increase administration costs of the scheme. It can be concluded that when setting up a national or regional cost-sharing scheme this issue has to be addressed and either non-economic operators like small-scale hobby livestock holders are included in a compulsory cost-sharing scheme or other mechanisms have to safeguard registration and compensation of this type of operators.

⁸⁹ UECEBV, The European Livestock and Meat Trading Union, declared in a statement that especially with respect of the indirect costs of epidemic disease outbreaks “industry and traders are very interested in seeing this risk covered”. The organisation also stated that “in order to clearly define the responsibilities ... of all the different parties involved, and in order to allow reaching the expected benefits such [a] system should be negotiated together by European authorities, national authorities and food business operators”.

This issue is especially relevant in new Member States, where large regions are characterized by rural structures and animals are kept in a large number of smaller holdings. Animal disease risk may pose a serious hazard to income and assets of some non-professional livestock keepers, i.e. insurance could provide significant benefits to them. The high livestock density in such regions may increase the importance of non-professional livestock keepers' risk-relevant behavior for total animal disease risk. It would be possible to provide incentives for prevention through a cost-sharing scheme, since they keep livestock for a living, i.e. for economic reasons. Hence non-professional livestock keepers would definitely react on economic incentives. However the range of reasonable prevention measures may be relatively small, since bio-security investments that involve significant fixed costs would not be undertaken, regardless of contribution reductions, i.e. the choice of prevention measures that can be influenced through incentives is small. Again, the inclusion of non-professional livestock keepers would significantly increase transaction costs of the scheme in relation to the insured value. Particularly with regards to the situation in some regions of the new Member States, the inclusion of non-professional livestock keepers could be analysed in detail in a full-scale feasibility-study on cost-sharing schemes⁹⁰.

This leads to the following conclusion for harmonised cost-sharing schemes:

16. ***A cost-sharing scheme could include industries related to livestock production as well as other parties. However only those operators should contribute to a cost-sharing scheme that are compensated for disease outbreak losses.*** Although participation of operators in cost-sharing schemes for diseases with public relevance is compulsory, operators have to be sure that they do not unduly finance the risks of other parties and that the scheme operates according to the common interest of those involved. The decision to include other parties than livestock producers has to balance benefits and costs of their inclusion.

5.6. Flexibility of implementation

5.6.1. A harmonised framework for cost-sharing schemes

One possibility for implementing a scheme that fulfils the insurance functions according to the conditions outlined above is to set up a uniform European cost-sharing scheme. This scheme could follow an existing national model such as a public animal health fund, to which every farmer would have to contribute (directly or through national affiliates). However the risks (diseases) a cost-sharing system is supposed to cover may differ nationally and even regionally. As a CSS does not only compensate losses, but also induces efficient on-farm risk management through risk-adjusted contributions, contract conditioning and monitoring, and subsidising prevention, it has to be regionally positioned. A uniform cost-sharing scheme at the European level would per definition not allow flexibility of implementation by the Member States (criteria VI). Member States currently feature various arrangements to cover losses from animal disease risk. The most feasible approach therefore seems to be to define a harmonised Community framework for national or regional cost-sharing schemes⁹¹, which could have different institutional set-ups, but would have to function according to harmonised principles. This would allow for flexibility of implementation by the Member States and

⁹⁰ Such a study could also analyse the feasibility of the inclusions of other relevant animal keepers, e.g. zoos, taking into account and balancing benefits and costs.

⁹¹ Including the option that several smaller MS decide to set up a joint scheme.

at the same time likely increase acceptance of stakeholders, as participation mechanisms are easier to implement at the national or regional level. Harmonised at the EU level should be:

- The obligation of Member States to introduce a cost-sharing scheme at the national or regional level with compulsory participation of livestock producers;
- The objective of the different schemes, i.e. providing efficient transfer of animal health risk from farmers to a cost-sharing scheme and inducing efficient on-farm risk management through differentiation of contributions and conditions of coverage;
- And the basic principles for efficient schemes, involving organisational principles like the responsibility for certain diseases only, and operating principles like conditions for incentive compatibility, covered risks and public financial support.

5.6.2. Overview of possible institutional arrangements at MS level

Possible institutional arrangements for covering losses from animal disease outbreaks can either be publicly or privately organised. Public cost-sharing schemes are set-up and operated by Member States or regional governments. We call such a scheme a *public fund*. Private arrangements on the other hand are set-up and operated through private organisations. Within private arrangements, we differentiate between *mutual funds* operated by farmers' associations and cost-sharing schemes that involve private insurers. The latter is further divided into a *competitive insurance market* and a *private insurers' pool*, so that there are four institutional options to be presented.

Each option will be introduced and assessed according to the following criteria:

- General analysis of the transaction costs of operation;
- Assets and drawbacks regarding the fulfilment of selected rules.

A cost-sharing scheme of any kind of institutional arrangement involves transaction costs. It involves costs to plan and implement regional strategies for disease prevention and control in coordination with the veterinary authorities, and it also involves costs to calculate and collect risk-adjusted contributions as well as to specify and apply compensation rules. However there are good reasons to assume that the institutional arrangement influences the amount of transaction costs a cost-sharing scheme needs for fulfilling these functions. Therefore transaction costs are one criterion for valuating different institutional arrangements. Strongly related to transaction costs is the expected acceptance among producers for a cost-sharing scheme. A scheme that needs 5% of average yearly contributions to fulfil its functions and has 95% left which it pays to operators or reserves for compensation payments in later years will, all things being equal, be more accepted among operators than a scheme with a ratio of 25% to 75%.

Particular efficiency conditions may be difficult to implement for certain institutional arrangements of CSS. Whenever this is the case, we will analyse it shortly and draw conclusions. On the other hand, particular institutional arrangements are appropriate to implement other rules. Ultimately this saves transaction costs of operating a cost-sharing scheme, but we will address such assets explicitly.

Costs of setting-up a cost-sharing scheme will not be analysed, because they strongly depend on existing cost-sharing arrangements in Member States. Setting-up a private insurers pool that operates according to the efficiency conditions would probably be much cheaper e.g. in Spain than in Germany, because Spanish insurers already established the pool *Agroseguro*. There is no such equivalent in Germany. On the other hand, it is much cheaper to implement a regional public fund that operates according to the efficiency conditions in Germany than in Spain, since it only requires adjusting some

operational principles of the existing *Tierseuchenkassen* in Germany. Set-up costs of the different options especially play a role for Member States that do not have functioning cost-sharing arrangements in place. Assets and drawbacks of the options indicate which institutional arrangement should be envisaged when a cost-sharing arrangement does not exist at all.

It is generally feasible to combine two or more options within one cost-sharing scheme, e.g. through creating hybrid forms or through dividing animal health risk and putting different cost-sharing schemes in charge of parts of the risk. For example, it would be possible to combine a public fund that compensates the value of culled animals with a compulsory private insurance for other costs such as business interruption losses. If a combination of two options through dividing risk is considered, however, Member States have to be aware that total transaction costs are likely to be higher compared to a single cost-sharing scheme.

5.6.2.1. Institutional option A – Public fund

Various organisational forms for a public fund are possible. A public fund could either be organised within the administrative hierarchy of a Member State or regional veterinary authority or outside of it as a self-administrated public corporation. From an economic point of view, a public fund is characterized by the functions it can perform within an efficient cost-sharing scheme. A scheme based on a public fund can take over government responsibility of a Member State and fulfill all the basic functions of an efficient cost-sharing scheme, including development and implementation of prevention and containment measures (e.g. if the public fund is managed by the MS veterinary authority). A public fund could also be limited to fulfill insurance functions, i.e. determining and collecting contributions, specifying compensation rules and settling compensation payments. There is no standard rule regarding task sharing between a Member State or regional veterinary authority and a public fund and regarding the degree of organisational independence of the public fund. As long as the Member State or regional veterinary authority influences public fund management, e.g. through sending members to the public fund's board or through authorising important management decisions, the public fund can take into account the government's interest and can take over public responsibility in animal health management. In order to improve the public fund's acceptance, farmers' associations (as well as other operators that may be covered) and veterinarians should be represented in the public fund's board besides officials from the Member State and/or regional veterinary authority.

If the public fund takes over public responsibility and performs public tasks, e.g. the implementation of eradication programs, the expenditures should not be funded from the farmers' contributions. This is necessary because the private arrangements for cost-sharing schemes (insurance, see below) are not able to take over public responsibility to that extent. If these functions were to be financed through farmers' contributions in a public fund, the financial burden for farmers who have to participate in a public fund could be higher than for farmers in a Member State or region that chooses to establish a private arrangement for a cost-sharing scheme. Thus farmers' contributions should only be used for expenses directly related to the insurance functions of a cost-sharing scheme, e.g. for the calculation and collection of contributions, the settlement of compensation payments, the investment of reserves as well as selected prevention measures that the scheme decides to implement or subsidise because it expects them to minimise the overall costs of disease (i.e. minimise the sum of compensated disease losses over time, taking into account the costs of prevention measures funded by the scheme).

The administration costs of public funds can be low. The German *Tierseuchenkassen* for example state that administration costs are generally less than 5% of total expenditures. A public fund could be expected to be highly accepted among producers, because a large part of the contributions it collects directly will be channeled into the fund and only be used for compensation payments. After a period of low losses, a significant amount of capital would be in the fund. This capital could be invested on

capital markets. The return on investment would directly flow into the fund. As the capital endowment of the fund improves, contributions could be lowered. Hence a public fund could be able to provide coverage at relatively low cost, provided there are several successive periods without significant losses.

It can be expected that public funds would be reluctant to hold large amounts of capital however, since they can substitute sufficient ex-ante contributions through raising ex-post contributions. Thus contribution patterns of public funds would likely be a smoothed and lagged copy of loss patterns. In theory this characterises inefficient risk transfer, but in practice high contributions are probably more accepted in periods following epidemic outbreaks, whereas high peace-time contributions would cause incomprehension.

The fact that elected politicians could have a certain influence over the management of a public fund could be a barrier for establishing a risk-adjusted contribution structure. Especially after years of high losses, contributions could be on a very high level for producers that lost their disease-free bonus and that are located in a high-risk areas. Public funds could then be under pressure to mitigate risk-adjustment of premiums, which leads to a distortion of competition within the fund's territory and reduces incentives for risk-adjusted farm-management decisions. This issue would have to be addressed when setting up the fund by creating strict guidelines and developing a management structure that prevents direct political influence.

All in all, public funds are a good institutional arrangement for a cost-sharing scheme. The close relation to the Member State's or regional veterinary authority saves transaction costs. Monitoring of compliance with legal and efficient standards can be pooled, the experience of the cost-sharing scheme administration can be used to improve legal standards, data for determining risk-adjusted contributions could be used for various aims. Examples for synergies abound. The reluctance to accumulate reserves may counter efficient risk allocation, but considerations about the farmers' acceptance to pay contributions relativise this aspect. Risk-adjustment of contributions could be critical, but is a feasible business principle for public funds. EU subsidies for Member States' or regional cost-sharing schemes should generally be conditioned upon compliance with the efficiency conditions detailed in this study. Regarding public funds, a special focus should be given to their risk-adjustment of contributions.

5.6.2.2. Institutional option B – Mutual fund

A mutual fund or mutual insurer is a non-statutory, privately organised cost-sharing scheme, which could be operated by farmers' associations. It is owned by the participating farmers and works like a private risk pool of the farming industry. This would lead to a high acceptance among farmers, but causes problems regarding the risk-adjustment of contributions. It is possible to establish different mutual funds for different sectors of the livestock industry, e.g. for dairy production, pig production, etc. A private organisation does not have the competence to fulfil sovereign tasks, so there is no possibility to assign public responsibilities to a mutual fund as far as they require regulation. Thus a mutual fund would have to perform the insurance functions of a cost-sharing scheme, i.e. calculation and collection of contributions, the settlement of compensation payments and the investment of reserves, as well as subsidising selected prevention measures.

In general, there is no reason to assume that a mutual fund is not capable to properly fulfil these functions. We have shown that differentiation of contributions can induce efficient on-farm prevention and protection. The question is, would a mutual fund establish a contribution structure that properly rewards efficient on-farm prevention and control measures? A mutual fund would act in the interest of all participating operators in its Member State or region. A lot of the public benefits of risk-adjusted farm management decisions accrue to farmers. A mutual fund would surely consider these public

benefits, since they accrue to farmers in terms of lower expected losses and, hence, lower contributions to the cost-sharing scheme. But there are public benefits of prevention, control and containment also accrue to parties outside of the livestock production industry. While we expect a public fund to consider total public benefits, since its management is publicly mandated, a mutual fund, whose management is chosen by the livestock production industry, could only consider that part of public benefits of prevention and protection that accrues to the livestock production industry. Hence the management of a mutual fund would have to be controlled whether the prevention and containment measures it induces through coverage conditions and differentiation of contributions meets efficient standards that take into account overall public benefit. The same is true regarding the subsidisation of selected prevention measures. Compared to a public fund, this causes additional monitoring costs for the Member State's or regional veterinary authority. Most disease outbreaks hit the livestock production industry harder than related and unrelated industries and public health however. Accordingly, most of the public benefits of risk-reducing behaviour accrue to farmers. Hence a mutual fund, managed by farmers' associations, possibly induces on-farm prevention and protection standards which are not too far away from efficiency.

A problem regarding mutual funds could be a legal issue. We have concluded that participation in a cost-sharing scheme has to be compulsory due to the public benefits involved with disease risk management of that diseases covered in the cost-sharing scheme. A private organisation may not have the legal instruments to force individuals to participate. Therefore a mutual fund may in some cases not be a feasible institutional arrangement for cost-sharing schemes, depending on the national legal framework. Mutual funds can certainly be set-up for other diseases that do not require compulsory participation of operators.

5.6.2.3. Institutional option C – Participation of private insurers

The insurance functions of a cost-sharing scheme could principally be fulfilled through private insurers competing on a private animal disease insurance market. However we would expect acceptance problems among farmers regarding compulsory coverage on private insurance market. The reason is that farmers would be obliged to fund marketing expenses and shareholder profits among others, which does not benefit them at all. Insofar transaction costs of a cost-sharing scheme involving a competitive insurance market could be relatively high.

It is a crucial business principle of private insurers to demand risk-adjusted premiums. The risk-adjustment of premiums would however be incomplete from a macroeconomic point of view. A private insurer on a competitive market would take into account the effect of a producer's risk characteristics on the risk of this particular producer. But in order to induce efficient on-farm management through a differentiation of contributions, public benefits have to be taken into account. Hence the benefits of insurance as an instrument to induce farmers to consider public benefits in farm management decisions would not be deployed in a private competitive insurance market. If private competitive insurers would fulfil the insurance functions of a cost-sharing scheme, the only instrument to induce efficient on-farm animal health management that takes into account public benefits would remain regulation and control.

The cumulative nature of animal disease risk requires risk allocation over time. In a competitive market, operators can regularly change their suppliers of animal disease insurance. An ex post premium increase of insurers that had been hit very hard by an animal disease outbreak would simply induce operators to switch to another insurer who would not have to post-finance high losses to that extent. Insurers anticipate that situation, which implies they would have to demand premiums, which

are sufficient to cover even extremely high losses at a certain level of confidence, e.g. through reinsurance.⁹² Therefore a cost-sharing scheme that is supposed to take over animal health risk and intends to implement efficient animal health management of all parties involved taking into account public benefits seems to be less advantageous with an involvement of private insurers in a competitive market. Private insurance on competitive markets however is a valuable instrument for transferring risks whose management does not involve significant public benefits, e.g. the risk of diseases not included in a compulsory cost-sharing scheme.

The problems described could be largely avoided with a private insurers' pool. This is a cooperation between private insurers who jointly establish and own the pool company, which is the only company offering insurance functions⁹³ of the cost-sharing scheme. Similar to public funds, the degree of organisational independency from the government, i.e. from the veterinary authority, is variable. A great advantage of a private insurers' pool is, from a policymakers' perspective, the low public effort it takes to set-up such a scheme, because private insurance companies would do a great deal of this job. Underwriting know-how as well as other insurance-related skills of the pool companies could be directly used, allowing for a fast implementation of the pool.

Regarding the capability to induce efficient on-farm risk management decisions through premium differentiation, a private insurers' pool matches the mutual fund/insurer option. The pool would definitely take into account the effect of risk characteristics on other farmers, because all farmers in the pool's territory are insured with the pool. As most of the public benefits of risk-reducing behaviour accrue to farmers, a pool possibly induces on-farm prevention and protection standards, which are not too far away from efficiency.

The fact that farmers would be obliged to fund profits of the pool companies could burden the acceptance among farmers. Compared to a competitive private insurance market, transaction costs of a private insurers' pool would be relatively low as marketing expenses would not be necessary. On the other hand, such a structure may be difficult to implement under a regulatory point of view.

5.6.3. Conclusions on institutional arrangements

The question on which institutional arrangement for a cost-sharing scheme is chosen should be up to the Member States and requires detailed feasibility analysis, including on legal aspects⁹⁴. To reduce set-up costs, Member States could take existing structures for animal health risk management, including compensation, into account.

From an economic point of view, the differences between the options depend on the details of the implementation and may not be that large. For example, the higher the influence of the Member State's veterinary authority on the management of a mutual fund/insurer or private insurers' pool is, the more these arrangements are able to take over public responsibilities, thus coming closer to the functions a public fund can fulfil. If a public fund is set-up to fulfil insurance functions only, and if the

⁹² The cumulative nature of animal disease risk at least temporarily requires some form of financial back up of any the options proposed here, see section 5.8.

⁹³ Like a mutual fund, a pool would not have the competence to fulfil sovereign tasks, so there is no possibility to assign public responsibilities to a pool as far as they require regulation.

⁹⁴ It has to be emphasized that this pre-feasibility study focuses on basic options for the institutional arrangements under a harmonised framework for cost-sharing schemes and the related economic aspects. Legal feasibility of a specific option has to be carefully considered in the framework of a feasibility study and also depends on the national legal framework.

public fund's management is strongly influenced by farmers, it comes close to a mutual fund regarding the role it can play in a cost-sharing scheme focussing on ensuring efficient animal health management of all parties involved. However, it has to be highlighted that the common rules deduced from the analysis have to be met in any of the proposed institutional arrangements to make sure that animal health risk is efficiently managed. Common rules imply significant changes of existing cost-sharing schemes, because the conditions for incentive compatibility and efficient risk transfer are currently not met. However, Member States can build upon their existing cost-sharing schemes and develop them further according to the rules of a harmonised EU framework for cost-sharing schemes.

This leads to the following conclusion for harmonised cost-sharing schemes:

17. A harmonised EU framework for national and regional cost-sharing schemes is needed, but this does not determine the institutional arrangements. Any cost-sharing scheme has to fulfil three tasks: Efficient animal health standards firstly have to be developed, and secondly to be implemented. Thirdly, a cost-sharing scheme has to fulfil insurance functions. These tasks can be fulfilled through one or more institutions, building upon existing structures in the MS. Possible options for institutional arrangements include:

- **Public fund:** A fund administered through a public authority.
- **Mutual fund:** A mutual fund or insurer owned by the participating operators.
- **Private insurers:** Participation of private insurers in a scheme.

The decision concerning the most appropriate institutional arrangement for a national or regional cost-sharing scheme has to be taken in line with the principle of subsidiarity at the MS level.⁹⁵

5.7. Public financial support to cost-sharing schemes

The question of how cost-sharing schemes are receiving public financial support is crucial for their operation. Several criteria are relevant here: Criteria II and III, relating to incentive compatibility and balancing costs and responsibilities of operators and governments, criterion IV regarding the prevention of distortion of competition between Member States, criterion V regarding the compatibility with EU state aid and WTO requirements and criterion VI concerning the effectiveness and rapidity of response of a cost-sharing scheme.

In order to assign responsibilities in animal health management and align it with costs, diseases are categorised according to their public relevance. As discussed before, to provide incentives for farmers to consider risk in farm-management decisions it is essential to demand risk-adjusted contributions to a cost-sharing scheme. However bio-security does not only depend on bio-security measures taken by farmers and other operators. The effectiveness of controls on tourists entering the Community and on commercial trade flows can also have an impact on the degree of exposure of operators to exotic diseases pathogens. There is a clear responsibility of EU or Member States' governments for public prevention and control measures to manage the risk of publicly relevant diseases, which is the reason that public prevention and control measures (including border control, eradication programmes, costs of veterinary service etc.) are generally not to be funded from contributions of operators to a cost-sharing scheme, but rather from tax revenues. The current EU "Veterinary Fund" (the system of EU co-financing of emergency measures under Council Decision 90/424/EEC) was developed as a tool for an additional public financial involvement in the compensation of operators for disease losses, to

⁹⁵ Several smaller MS may also decide to set up a joint scheme.

safeguard effective and rapid control measures in case of disease outbreaks. In the consultation with stakeholder organisations there was a strong interest expressed by all parties involved to keep the “Veterinary Fund” as an instrument of EU intervention⁹⁶. Thus the analysis in this chapter aims at exploring ways for public financial involvement without distorting incentives and competition, including through a possible EU co-financing of national or regional cost-sharing schemes.

5.7.1. Public financial support and distortion of competition

Subsidisation of a cost-sharing scheme has to be carefully designed in order to avoid a distortion of competition between farmers in different Member States. A main characteristic of the current system of financing livestock disease risk established with Council Decision 90/424/EEC is that outbreak losses are covered by the EU to a significant part. That means, EU co-financing is loss-dependent, i.e. the EU grants higher subsidies to regions with higher risk. In the period between 1997 and 2005 approximately 85% of EU co-financing from the “Veterinary Fund” was paid to only two MS (the UK and NL, see section 3.1). Therefore the system is characterised through systematically subsidising high-risk regions, where outbreaks occur more often and/or are more costly than average. This is problematic as it distorts competition in favour of operators in high-risk regions⁹⁷.

Besides distorting competition, loss-dependent subsidies run counter to the key objective of a cost-sharing scheme, which is to make sure that animal disease risk is efficiently managed. Animal disease risk is not purely stochastic. The prevention, control and containment measures taken by governments and operators significantly influence the probability of an outbreak and/or expected costs and losses of an outbreak. With regards to on-farm prevention, operators chose an efficient level of bio-security when they are forced to consider public benefits, besides their own costs and benefits, of bio-security investments. Any loss-dependent subsidy could change operator’s prevention decisions, since it changes benefits. This can be illustrated with the following example: Consider a cost-sharing scheme believes a certain bio-security investment of a particular operator would reduce expected losses on the scheme’s territory by 1000 € per year. Hence it would grant a safety bonus of 1000 € per year to the operator, conditioned on the bio-security investment. If the bio-security investment costs 800 € per year, it is an efficient prevention measure, and the operator would invest in return for the safety bonus. Now consider that the EU subsidises 50% of all compensation payments. As the cost-sharing scheme has to demand risk-adjusted contributions, it could only provide a safety bonus that reduces the operator’s contributions by 500 € for the bio-security investment. Hence an operator deciding on investments on a cost/benefit basis would not invest, and on-farm prevention would be inefficient. As can be seen from the example, loss-dependent subsidies do not only distort competition, they also destroy the potential of cost-sharing schemes to induce efficient on-farm prevention. This may contribute to the continuation of unsustainable situations in which inefficient prevention prevails in livestock production, i.e. too many disease outbreaks happen.

There are reasons why it could be politically desired to subsidise high-risk regions stronger than low-risk regions. Social aspects (see criterion III) of a cost-sharing scheme may require special support to high-risk regions, e.g. because operators in high-risk regions would not be competitive when they are

⁹⁶ For example, Copa-Cogeca stated in a written comment on the Working Paper presented on 17 March 2006 that “farmers cannot be left alone to assume the responsibility for and the cost of measures to control animal diseases and their consequences. Often, despite appropriate preventive measures, farmers are faced with threats over which they have little, and in most case no, control. ... this is why the existence of the current EU “Veterinary Fund” should not be questioned; neither should the balance between community and national co-financing of animal health measures”.

⁹⁷ A high risk region is not necessarily a region where bio-security measures are lower. A major contribution factor is the herd density that has significant effect on the expected maximum losses. These can be much higher in “intensity hot spots”.

obliged to pay risk-adjusted contributions. If this is the case, the least distorting approach could be to simply grant higher peace-time support (see “financing option A” below) to high-risk regions. This would not affect the capability of a high-risk region’s cost-sharing scheme to induce efficient prevention, provided that farmers’ contributions make up for a significant share of expected disease outbreak losses in spite of public financial support. However, even this approach implies a distortion of competition between high- and low-risk regions. Additionally, in the long run it can be problematic to subsidise non-competitive production structures. Although change in economic structure may be painful for those directly affected, it is likely to be beneficial in the long-run. This can be illustrated with the example of a high-risk area where the main determining factor for the higher risk/losses is that herd density is much higher than elsewhere. If this region would not be granted additional public financial support for covering the higher risk, the least competitive producers would leave the market. Hence herd density would decrease, and the former high-risk region would become over time an average-risk region. Remaining producers could successfully compete on the markets for livestock products, without needing additional public support.

Current compensation schemes for direct losses of livestock epidemics differ significantly between Member States with respect to farmers’ contributions. In some Member States, farmers have to fund 100% of the national share up to a certain threshold, in other Member States, there is no farmer contribution at all. This also distorts competition in favour of farmers located in Member States that require relatively low or no contributions of farmers to fund the “national” part of losses.

This leads to the following conclusion for harmonised cost-sharing schemes:

18. ***Public financial support to cost-sharing schemes has to be harmonised to reduce potential distortions of competition.*** Harmonised rules have to determine the sum of financial support from the EU and from Member States to a cost-sharing scheme, so that potential distortions of competition are reduced, since public financial support could imply a systematic subsidisation of high-risk areas.

5.7.2. Public financial support and incentives for prevention

In section 5.5.2 the need to provide incentives for prevention measures through a safety and a disease-free bonus has been discussed. These bonuses have to reduce the contributions to a cost-sharing scheme significantly in order to be effective. Subsidisation of cost-sharing schemes would reduce operator’s contributions to the schemes and, hence, the possibilities of a scheme to provide incentives through a differentiation of contributions. Therefore the total amount of subsidies has to be limited to a certain share of expected expenses, so that the residual share provides sufficient opportunities for a cost-sharing scheme to induce efficient on-farm bio-security measures through the reduction of contributions. Other expenses of a cost-sharing scheme, i.e. the expenses for subsidising certain prevention measures, could be fully reimbursed from public sources, however, if this is decided at a political level.

It has to be noted that the conclusion that operators have to contribute a significant share of the cost-sharing scheme’s expenses does not necessarily imply an overall reduction of the total share of public contributions that is directed to the compensation of disease losses, as already currently farmers and other operators bear a significant part of the disease outbreak losses when business interruption losses in restriction zones are taken into account.

This leads to the following conclusion for harmonised cost-sharing schemes:

19. *Public financial support for compensation payments of cost sharing schemes must be limited so that farmer's contributions fund a significant share of the cost-sharing scheme's expenses.* A cost-sharing scheme has to provide incentives for risk-adjusted farm management decisions through differentiating contributions. This implies that a significant share of a cost-sharing scheme's compensation payments would need to be funded through farmers' contributions to the cost-sharing scheme. Other expenses of a cost-sharing scheme, e.g. expenses for subsidising certain prevention measures, could be fully reimbursed from public sources.

5.7.3. Public financial support and compatibility with EU and WTO requirements

A preliminary analysis of the current situation indicates that a harmonised system of cost-sharing schemes for epidemic livestock diseases can be brought in line with EU state aid and WTO requirements. As contributions of operators to cost-sharing schemes that are set up as e.g. a public fund would be compulsory, compensation payments from the fund would fall under state aid rules. The Commission is currently revising its framework for state aid in the agricultural sector. In February 2006, a draft for a new Regulation was published that is intended to simplify agricultural state aid rules and facilitate crisis support⁹⁸. According to the new framework, which is designed to be in line with WTO requirements, aid to compensate farmers for losses caused by animal diseases shall be compatible with the common market and be exempt from the notification requirement of Article 88(3) of the Treaty if it fulfils, among others, conditions listed in Article 10 of the draft Regulation that include:

- Compensation must be calculated in relation to:
 - the market value of animals killed by the disease or destroyed by public order as part of a compulsory public prevention or eradication programme;
 - income losses due to quarantine obligations and difficulties in restocking;
- The outbreak of disease or pest infestation must have led to a production loss which exceeds 30% of the average production of the farmer concerned in the preceding three-year period or a three-year average based on the preceding five year period, excluding the highest and lowest entry;
- The aid must be limited to losses caused by diseases for which an outbreak has been formally recognised by public authorities;
- The aid must be granted in respect of diseases listed in Article 3 or the Annex to Council Decision 90/424/EEC.

Also aid to compensate farmers for the costs of prevention and eradication of animal diseases, incurred for the costs of health checks, tests and other screening measures, purchase and administration of vaccines, medicines, slaughter and destruction costs of animals shall be compatible with the common market and shall be exempt from the notification requirement if, among others, the gross aid intensity does not exceed 100% and the aid does not involve direct payments to producers. It can be concluded that any payments from cost-sharing schemes for prevention and compensation of

⁹⁸ Draft "COMMISSION REGULATION (EC) ... on the application of Articles 87 and 88 of the EC Treaty to State aid to small and medium-sized enterprises active in the production of agricultural products and amending Regulation (EC) 70/2001"

operators would not fall under the notification requirements, if the conditions in Art. 10 of the draft Regulation are adhered to once the Regulation comes into force.

This leads to the following conclusion for harmonised cost-sharing schemes:

20. ***Public financial support to cost-sharing schemes and compensation rules has to take into account EU state aid rules and WTO requirements.*** This implies, *inter alia*, that compensation payments of cost-sharing schemes can only be provided for losses arising from diseases for which an outbreak has been formally recognised by public authorities and that subsidising prevention measures does not involve direct payments to farmers.

5.7.4. Public financial support and effectiveness and rapidity of response

Community co-financing rules and procedures are complex and involve a significant administrative burden which has led in the past in some cases to delays of several years between disease outbreak and co-financing payments from the Community budget to Member States. To make sure that Member States' or regional cost-sharing schemes work effectively and respond rapidly, co-financing rules should be designed in a simple and transparent manner. Compensation rules of a cost-sharing schemes regarding the indemnification of operators require a certain level of complexity to safeguard that operators with infected herds are not better or worse off than other operators affected by the disease. However, Member State and Community financial support to a cost-sharing scheme does not need to reflect this complexity. Defining simple rules for public co-finances reduces the administrative burden, increases accountability and allows to minimise time involved for processing requests.

This leads to the following conclusion for harmonised cost-sharing schemes:

21. ***Rules for public financial support to cost-sharing schemes should be designed in a simple and transparent manner.*** Compensation rules of a cost-sharing system for the indemnification of operators require a certain level of complexity to ensure that operators with infected herds are not better or worse off than other operators. Member State and Community financial support to a cost-sharing scheme, however, does not need to reflect this complexity and should be designed as simply as possible.

5.7.5. Main alternative options for public financial support

The discussion of how to integrate public financial support into cost-sharing schemes resulted in a need for a simple and transparent EU-wide harmonised system determining the total public support (sum of EU and MS government support) and the degree of Community co-financing. But there could be a conflict of objectives in developing a subsidisation system: On the one hand, loss-dependent financial support might distort competition between high-risk and low-risk areas. On the other hand loss-independent financial support would mean that in the case of a large scale outbreak no additional support to the cost-sharing scheme could be given. That might in turn lead in some cases to a delay in the implementation of effective (and costly) control measures such as large scale-culling. For that reason three alternatives for public financial support to cost-sharing schemes are presented below: *Peace-time support* (financing option A), *co-financing of losses excluding business interruption costs* (financing option B1) and *co-financing of losses including business interruption costs* (financing option B2). Option A does not distort competition. On the other hand approach B could distort competition to a certain extent, but co-financing of disease outbreak losses in “war times” could be an incentive for rapid response and effective control measures during catastrophic outbreaks of diseases.

5.7.5.1. Financing option A: Peace-time support

Peace-time support means to decouple public contributions from actual losses. This approach would put an end to a system where low-risk regions contribute to financing disease outbreak losses in high-risk regions. Public financial support from both the Member States and the Community could have the following three main pillars:

- *Support to setting up cost-sharing schemes.* This support could consist in expert advice, training and a start-up financing.
- *Support to prevention and surveillance programmes,* e.g. on basis of the types and numbers of livestock covered by a cost-sharing scheme.
- *Support to running costs and operators contributions,* e.g. on basis of the types and numbers of livestock covered by a cost-sharing scheme.

Public financial support would be provided on a regular basis, independent from whether an outbreak occurred or not (“peace-time”). The public financial support could be used to cover operating costs and to create a fund managed by the cost-sharing scheme for future outbreaks as well as for financing selected prevention measures.

5.7.5.2. Financing option B1: Co-financing of losses excluding business interruption costs

Co-financing of losses would follow the lines of the current system of subsidisation, which directly finances disease outbreak losses once an outbreak has occurred. Public financial support could have the following three main pillars:

- *Support to prevention and surveillance programmes,* e.g. on basis of the livestock numbers covered by a cost-sharing scheme.
- *Support to animal value lost* in case of a disease outbreak as fixed percentage of the compensation paid to the operator.
- *Previously agreed flat rates for all other losses of operators that are currently financed under Council Decision 90/424/EEC.* This would be in contrast to the current situation where other direct costs are co-financed on basis of the real expenses incurred, which may lead to inflated costs and complicated procedures. The flat rates would have to be defined at EU level prior to an outbreak and could be related to the numbers of animals/operators affected etc. Definition of flat rates should take into account appropriate price indices to reflect reasonable differences between Member States.

5.7.5.3. Financing option B2: Co-financing of losses including business interruption costs

This financing approach would be similar to the one described in the previous section (option B1), however, compensation for business interruption costs paid by cost-sharing schemes would also be co-financed on the basis of pre-defined flat rates (e.g. per animal type/operator type).

5.7.6. Implications of the financing options on EU co-financing

There are several advantages of financing option A (peace-time support) with respect to EU co-financing:

- Peace time support to cost-sharing schemes would not distort competition in favour of high-risk areas;
- This approach could combine funding of the current “Veterinary Fund” with funding that would otherwise be used for exceptional support measures relevant for farmers in restriction zones. This would increase predictability for all parties, including operators, that currently cannot predict whether negotiations in case of a large-scale outbreak will lead to relevant exceptional market support measures;
- The administrative burden would be significantly reduced for all parties involved, including operators, Member States and the Commission;
- Time for compensation of disease losses of operators would likely be reduced, as most related procedures could be administered at the level of the cost-sharing scheme;
- The risk for the Community budget would be reduced to a level agreed in the EU decision making process in “peace time”, reducing pressure that could result when such negotiations are conducted during a large-scale disease outbreak;
- Peace-time support could provide a permanent incentive for Member States to set up a cost-sharing scheme that follows harmonised requirements.

What are the advantages of the other two approaches (B1 and B2)? As said above, the main arguments to continue a loss-dependent system of subsidisation would be to ensure effective and rapid disease control measures by Member States or regional cost-sharing schemes in crisis situations. This is a valuable argument when large-scale culling involves significant costs. It has, however, to be emphasized that a decision for a co-financing of losses (option B) by no means is a guarantee for effective and rapid response in case of disease outbreak. Key aspects, regarding diseases with a need for EU coordinated action, are the cooperation and coordination of risk management measures between the EU and Member States’ veterinary authorities. Effective and rapid response might require measures such as continuing to support the development and implementation of contingency plans jointly with stakeholders, performing training programmes for organisations of operators and for cost-sharing schemes, monitoring compliance with risk management standards, and many more. The mere participation in losses does not ensure effectiveness of response to an outbreak, but might function as an incentive for the development and implementation of efficient animal health risk management.

Independent of which approach is chosen to provide financial support to cost-sharing schemes, it has to be noted that the level of support is a political decision. It would therefore also be possible to decide at the political level to add a “new Member State bonus” to the system to allow for higher rates of public support and/or Community co-financing to cost-sharing schemes in some new Member States where conditions are not yet sufficient to contribute to a similar degree as in other Member States. However, in all cases operators should have to finance a significant share of losses through contributions to ensure provision of incentives for prevention through cost-sharing schemes.

5.7.7. Trade-off between distortion of competition and efficient risk management

The decision whether a peace-time or a loss-dependent co-financing approach is taken is economic in nature. The distortion of competition arising from co-financing in losses can lead to a continuation of unsustainable and inefficient livestock production structures. On the other hand, a lack of loss

dependent co-financing could under some circumstances lead to ineffective control of animal disease outbreaks, which in turn may prolong the duration and increase total costs and losses of a disease outbreak (see previous section). Any approach taken has to balance these costs, which are, unfortunately, very difficult to quantify at this stage. The trade-off between distortion of competition and effectiveness of risk management with regards to the approach of subsidising a cost-sharing scheme could be further analysed in a feasibility study on cost-sharing schemes. Ultimately it is a matter of policy making, which also has to take into account social aspects of different subsidisation systems.

It has to be noted that it is also possible to combine the different financing options into a two-stage approach where loss-dependent public financial support would be continued for a limited period of time. When cost-sharing schemes are fully operational in all Member States, public financial support of the cost-sharing schemes could be gradually shifted to peace-time support after a transition period of several years. This two-stage approach would give time to cost-sharing schemes to prepare for a structural change in the subsidy system towards peace-time support and would not support unsustainable production structures in the long run. The decision which of these alternatives is chosen has to be taken in a harmonised way across Member States. Co-financing of losses could also be chosen for certain types of losses only (as can be seen from the difference between options B1 and B2). It is however crucial that the discussion on the question for which sort of disease outbreak losses public financial support is given is not mixed with the discussion on which losses have to be compensated by cost-sharing schemes. As has been analysed above, cost-sharing schemes have to cover all disease outbreak losses of operators to guarantee that an operator with an infected herd is not better off than an operator under movement restrictions. However, this does not mean even for a loss-dependent co-financing that contributions to each specific type of loss are needed. Some losses could be exclusively born by all operators in a Member State, with the cost-sharing scheme providing the mechanism to reduce the risk for the individual operator. The table on the next page summarises the alternative financing options.

The discussion in this section leads to the following conclusion for harmonised cost-sharing schemes:

22. *Public financial support to cost-sharing schemes could be either peace-time or loss dependent.*

The distortion of competition arising from co-financing in losses can lead to a continuation of unsustainable and inefficient livestock production structures. On the other hand, a lack of loss dependent co-financing may lead to ineffective control of animal disease outbreaks, which in turn may prolong the duration and increase total costs and losses of a disease outbreak. Any approach taken has to balance these aspects. Possible options for public financial support to cost-sharing schemes include:

- **Option A:** Peace-time support;
- **Option B1:** Co-financing of losses excluding business interruption costs;
- **Option B2:** Co-financing of losses including business interruption costs.

It is also possible to combine different options in a two-stage approach where loss-dependent public financial support would be continued for a limited period of time before gradually shifting to peace-time support when cost-sharing schemes are fully operational in all Member States.

Table 18: Overview of loss category, compensation payments to operators and possible options for public contributions to cost-sharing schemes

Cost/Loss category	Description	Compensation of operators by the cost-sharing scheme in case of disease outbreaks	Public co-financing of cost-sharing schemes		
			Option A: Peace-time support to CSS	Option B: Co-financing of losses	
				B1	B2
<i>Prevention costs</i>	Bio-security measures	In principle to be borne by operator, some prevention and surveillance programs covered by CSS and other sources (rural development measures)	Public contribution based on pre-defined criteria such as number of animals/operators covered by cost-sharing scheme, relevance of prevalent diseases, programs proposed etc.		
<i>Disease outbreak losses caused directly by restrictions imposed by veterinary authorities</i>	Stamping-out of infected herds	Partial compensation, depending on time of reporting (sick/dead animals), based on animal value at time of slaughter	<u>Regular public financial support</u> (“peace-time”) based on pre-defined criteria such as number of animals covered by cost-sharing scheme to cover operating costs and to create a fund managed by the cost-sharing scheme for future outbreaks	<u>Fixed percentage</u> of public contribution to animal value compensated by the scheme, possibly depending on disease category	
	Pre-emptive slaughter of contact herds, welfare slaughter	Full compensation of animal value			
	Partial loss of animal value due to control measures (e.g. emergency vaccination)	Full compensation of loss in animal value		Public contribution to the scheme based on predefined <u>flat-rates</u>	
	Costs of slaughter and rendering, disinfection and other direct disease control costs	Full compensation or predefined flat rate			
	Business interruption costs, other expenses directly related to established restriction zones	Predefined flat rate	No public contribution	Public contribution to the scheme based on predefined <u>flat-rates</u>	
<i>Price risks operators</i>	Drop in animal value due to disease outbreaks	Not covered			
<i>Losses other sectors</i>	Losses of industries related or unrelated to the livestock industry	Not covered			

5.8. Financial feasibility of cost-sharing schemes

Efficient animal health risk management requires public and individual prevention and control efforts as well as risk transfer away from producers. We have presented several feasible options for the institutional arrangement of a cost-sharing scheme. In each of the institutional options, different tasks of efficient animal health risk management can be fulfilled, but all of them are designed to bear farmers' animal health risks. Thus we have to make sure that these organisations can handle animal health risk in all possible situations.

5.8.1. Need to back up CSS for disastrous events

A cost-sharing scheme collects farmers' contributions and, depending on the financial option chosen, public financial support to cover its costs associated with fulfilling insurance functions. As this income is adjusted to risk, i.e. to expected losses, a cost-sharing scheme will immediately be able to cover disease outbreak losses. Provided that disease outbreak losses are significantly under their expected value during the first years a cost-sharing scheme is operating, it can accumulate notable reserves to even absorb a disease outbreak that affects a certain share of animals on its territory. However, animal health risk is highly cumulative, which means that one loss event can trigger other loss events. Animal disease risk is characterised by significant probabilities for catastrophic losses. Even after several disease-free years, a cost-sharing scheme might not have the financial capacity to bear the losses of a catastrophic outbreak on its territory, which could lead to compensation payments that amount to multiple yearly incomes and exceed the sum of contributions and reserves available for compensation payments.

There are two possible solutions to address this problem. A cost-sharing scheme could use additional sources of funding that rapidly provide sufficient capital to cover catastrophic losses. The alternative is to establish a ceiling on compensation payments: the cost-sharing scheme would only compensate losses up to a pre-defined level. The former implies that the risk of a catastrophic outbreak is fully borne by the cost-sharing scheme and the party providing these emergency funds, the latter leaves it mainly to the operators. It is obvious, however, that farmers and other operators have the least capacity to bear the catastrophic part of animal health risk, since it can take an existential magnitude and could lead to bankruptcy and other tragedies. Other options are that this risk is covered by private re-insurers or the government. One or several re-insurers would have the capacity to bear disastrous risk. Private re-insurers however need to hold a significant amount of capital to be able to cover that part of the risk, which increases costs of coverage and ultimately leads to higher contributions and/or subsidies for a cost-sharing scheme. Governments, on the other hand, would be able to bear disastrous risk at a reasonable price. Governments are unlikely to go bankrupt, and therefore do not need to hold specific reserves for this aim or arrange (costly) risk-sharing. In the following section the focus is therefore on solutions that involve government budgets to avoid cost-sharing schemes from inability to pay compensations, i.e. to cover animal health risk on a second stage, although in principle solutions involving private re-insurers would also be possible.

When the institutional arrangement of a cost-sharing scheme involves a mutual fund or private insurers, insurance regulation regarding solvency applies to the scheme. That means, the cost-sharing scheme would be obliged to hold a certain amount of capital to reduce the probability of ruin. From an economic point of view, the below mentioned instruments to back up cost-sharing schemes are a substitute for a (mutual or private) insurer's risk capital. It is important that this aspect is taken into account in an insurer's solvency requirements. Otherwise an insurer would be obliged to hold a large amount of capital, which increases the price of coverage and probably leads to unreasonably high premiums. The ongoing reform process of EU insurers' solvency requirements (Solvency II) has to be

taken into account when a system to back up cost-sharing schemes for disastrous events is developed.⁹⁹ The following analysis from an economic point of view presumes that all instruments that provide risk capital to cost-sharing schemes will also be accepted as solvency capital by insurance regulating authorities.

5.8.2. Use of government budgets to cover catastrophic events

With regards to government funds being the lender of last resort, there are generally three ways for government to help cost-sharing schemes perform insurance functions when claims exceed total means available for compensation.

1. Governments could provide unconditional guarantees, i.e. reimburse claims exceeding the financial capability of a CSS. This form of emergency support is similar to the current approach for covering direct losses of disease outbreaks and to financial option B, the co-financing of losses (see section 5.7.5). It has to be emphasized that if the approach to co-finance losses is chosen for subsidising cost-sharing schemes, MS and Community would continue to bear the animal health risk to the extent of the co-financing rate. Thus the decision about how to subsidise cost-sharing schemes is a question of financial feasibility in that case.
2. A second way is to provide state-run reinsurance to cost-sharing schemes, i.e. the coverage of risk through a government in return for an ex-ante determined premium, paid by the cost-sharing scheme. This would imply a risk-adjustment of contributions of the cost-sharing schemes to the public re-insurer. Risk-adjustment, however, involves significant transaction costs.¹⁰⁰
3. The third approach is to back up the capability of cost-sharing schemes to pay compensation through loans provided by governments, which we will call contingent capital. This approach is detailed in the next section.

5.8.3. Contingent capital

Contingent capital is provided to cost-sharing schemes as soon as the contingency arises that the cost-sharing scheme is unable to pay compensations. A government loan is provided at predefined conditions regarding the pay back period and the interest rate applied. Contingent capital has to be provided to every national or regional cost-sharing scheme at the same conditions, regardless of which institutional arrangement is chosen to fulfil the insurance functions. The interest rate could be determined through a market-based interest rate that reflects rate of return for low-risk portfolio¹⁰¹. Regarding the pay-back period, cost-sharing schemes could be obliged to pay-back available funds until the contingent capital provision is settled (the loan is repaid), i.e. before building up own

⁹⁹ Solvency II is an ongoing, fundamental review of the current insurance Directives. It includes a review of the overall financial position of an insurance undertaking to ensure adequate policyholder protection in all EU Member States. A key objective is that the requirements better reflect the true risks of an insurance undertaking. Another important feature of the new system will be the increased focus on the supervisory review process. More information is available under http://ec.europa.eu/internal_market/insurance/solvency_en.htm.

¹⁰⁰ If a competitive insurance market is chosen as the institutional arrangement of a cost-sharing scheme, state-run reinsurance is the appropriate back up system to avoid insolvency. The provision of contingent capital, which is explained below in more detail, is not feasible with this option due to the operators' possibilities to change their insurers, see section 5.6.2.3.

¹⁰¹ E.g. long-term EU government bond yields.

reserves. Contingent capital should be provided to public funds, mutual funds and private insurer's pools at the same conditions. This would prevent a distortion of competition in favour of high risk areas, which would arise from unconditioned state guarantees.

An outstanding question is on which level contingent capital should be provided. The Community as a lender of last resort would guarantee that capital is provided to every cost-sharing scheme with the same conditions. This would also mean that animal health risk is ultimately covered in an EU wide pool. Member States' governments could also act as the lenders of last resort for the cost-sharing schemes operating on their territory. In order to avoid hidden subsidies of Member States' governments to their cost-sharing schemes, the process of providing and paying back contingent capital to cost-sharing schemes has to be transparent and harmonised. On the other hand, Member States have more possibilities to incur debt or raise taxes compared to the Community, i.e. have a higher risk-bearing capacity. From an economic point of view, it is not important on which level state guarantees are provided to cost-sharing schemes, provided that back up conditions are harmonised in order to avoid a distortion of competition.

This leads to the following conclusion for harmonised cost-sharing schemes:

23. ***The Community or Member States could provide contingent capital to cost-sharing schemes on their territories if their funds run dry.*** As animal health risk is highly cumulative, it is likely that cost-sharing schemes in some cases are unable to meet all claims for compensation after a major disease outbreak. A public loan provided to a cost-sharing scheme at predefined conditions regarding the pay back period and the interest rate, is an adequate funding mechanism with low transaction costs. Contingent capital would need to be provided at harmonised conditions to prevent a distortion of competition. Further analysis of options for the provision of contingent capital is required.

5.8.4. Budgetary implications for Member States and the Community

A quantitative ex-ante assessment of the budgetary implications of different financing options is problematic, as comprehensive long-term data series regarding the relevant types of losses do not exist and animal health risk may change over time. For example, if a policy of emergency vaccination were to be applied in the future instead of large scale culling, this would have a significant impact on total expected losses due to livestock disease outbreaks. Also, the implementation of cost-sharing schemes in itself can be expected to reduce the overall losses over time, as the schemes are geared to promote efficient animal health management and an increased responsibility of operators can be expected to have beneficial impacts on the level of bio-security applied. The following analysis is therefore qualitative in nature and has to be detailed in a full-scale feasibility study.

Currently animal health risk for direct losses lies with the government in most Member States, with a significant part co-financed by the Community. As has been pointed out before, the individual operators themselves mainly cover other losses such as business interruption costs. Therefore total risk is currently already shared between public institutions and operators. All three financial options described above would have an influence on how risks are to be shared in the future (under the assumption that cost-sharing schemes in all MS would be operating¹⁰²):

- If a *peace-time support* is chosen (financial option A), the budgetary implications for Member States and the EU mainly depend on the extent to which peace-time support is granted to cost-

¹⁰² This overview does not include the initial costs for a MS to set up a cost-sharing scheme

sharing schemes. EU budgets could be burdened or released, depending on the political priorities. The decisive feature of this approach is that neither the MS nor the EU budgets would commit to unlimited contributions to the costs and losses of catastrophic livestock disease outbreaks any more.¹⁰³

- If a *co-financing of losses excluding business interruption costs* is chosen (financial option B1), budgetary implications can only be assessed ex-post since they depend on the realisation of animal health risk. If the co-financing rates would be adjusted to be precisely in line with current co-financing arrangements (regarding level of co-financing and types of costs covered), there would not be expected a change to the commitment of both MS and EU compared to the current system.
- If a *co-financing of losses including business interruption costs* is chosen (financial option B2), budgetary implications can also be assessed ex-post only since they depend on the realisation of animal health risk. If the co-financing rates would remain similar as the current rates and other losses such as business interruption costs of operators in restrictions zones would additionally be co-financed through financial support to cost-sharing schemes, this approach would likely increase the commitment of both EU and MS¹⁰⁴.

As has been pointed out before, the options for public financial support described above (i.e. the financial flows between Community/MS and CSS) do not have any impact on the compensation rules that have to be applied for the compensation of individual farmers by the cost-sharing scheme (i.e. the financial flow between CSS and operators). The analysis in section 5.5.2 showed that any cost-sharing scheme necessarily needs to cover all disease outbreak losses, including business interruption costs. The options described above determine, however, the financial flows between MS/Community and the cost-sharing schemes and therefore determine which part of the total losses lies with the public and which part of the losses lies with the collective of operators covered by a scheme. Financial option A limits the amount of disease outbreak costs and losses borne by Member States' and Community budgets to a politically agreed level. Option B1 does not imply an increase in the share of disease outbreak costs and losses borne by Member States' and Community budgets, whereas option B2 could imply an increase in the share of disease outbreak costs and losses borne by the public.

Although budgetary implications for Member States' governments cannot be outlined in detail here, since they also depend on current cost-sharing arrangements in the Member States, it should be emphasized that under all options the obligation to provide contingent capital to a cost-sharing scheme is a serious financial commitment for Member States, which could result in the obligation to provide a large-scale loan of one billion € or more in a worst case scenario¹⁰⁵. However, one party has to provide

¹⁰³ Except committing to the provision of contingent capital, which would have to be repaid over time by the CSS.

¹⁰⁴ For comparisons with the current financial commitments, it is important to define the basis appropriately: for example, in the case of the Community budget, the basis of comparison with current spending could be the sum of the average annual payments for disease outbreak losses of operators under veterinary restrictions, including payments for veterinary emergency measures (the "Veterinary Fund") and other relevant payments, e.g. exceptional market support measures.

¹⁰⁵ The public financial commitment through the provision of contingent capital can be temporary or permanent, depending on future losses and contributions to a cost-sharing scheme. If contributions to a CSS are based on the expected value of losses, cost-sharing schemes cannot be expected to build up sufficient reserves that allow them to cover animal disease risk without a back up system for catastrophic losses. It is, however, possible to demand higher contributions, so that capital accumulation is planned. In that case, a cost-sharing scheme would be able to cover animal disease risk without state guarantees at some point in time in the future. The length of the transition period would crucially depend on losses during this period. As the public guarantee, e.g. provision of contingent capital, is a subsidy to the cost-sharing scheme, a harmonised time-frame to build up sufficient reserves should be given to avoid a distortion of competition between cost-sharing schemes.

this risk-bearing capacity. Farmers are the most inappropriate party to bear disastrous risk, since it can devastate their livelihoods, unlike governments. Except from the provision of contingency capital, which is to be paid back by the cost-sharing scheme over time, this system will not require undue levels of public funding. Of course, in case of a large-scale outbreak pressure to convert the government loan into an ad-hoc payment has to be resisted. Provided that conditions for repayment of the loans are harmonised, this system will also minimise a potential distortion of competition between operators in different Member States.

5.9. Conclusions

The outlines of possible principles of harmonised cost-sharing schemes have been described in detail in the previous sections. It would appear that what would need to be harmonised at the EU level would be:

- The obligation of Member States to introduce a cost-sharing scheme at the national or regional level with compulsory participation of livestock producers;
- The objective of the different schemes, i.e. providing efficient transfer of animal health risk from farmers to a cost-sharing scheme and encouraging efficient on-farm risk management through differentiation of contributions and conditions of coverage;
- The basic principles for efficient schemes, involving organisational principles such as taking responsibility only for certain diseases, and operating principles such as conditions for incentive compatibility, covered risks and public financial support.

Main options that have to *be decided at EU level* include the details of disease categorisation, the operating principles and the framework of public financial support. The following options for financial support have been presented:

- **Option A:** Peace-time support;
- **Option B1:** Co-financing of losses excluding business interruption costs;
- **Option B2:** Co-financing of losses including business interruption costs.

The analysis concluded that only financial option A limits the amounts of disease outbreak costs and losses borne by Member States' and Community budgets to a politically agreed level. It is also possible to combine different options in a two-stage approach where loss-dependent public financial support would be continued for a limited period of time before gradually shifting to the more advantageous peace-time support when cost-sharing schemes are fully operational in all Member States.

Main options that have to be decided at *Member State level* include the institutional arrangements selected for implementing the cost-sharing schemes. The following options could be considered:

- **Public fund:** A fund administered through a public authority.
- **Mutual fund:** A mutual fund or insurer owned by the participating operators.
- **Private insurers:** Participation of private insurers in a scheme.

It would also be possible to create hybrid forms e.g. by dividing animal health risk and putting different cost-sharing schemes in charge of parts of the risk.

The analysis presented in this pre-feasibility study concludes that a harmonised framework for cost-sharing schemes is a feasible option. A system of harmonised cost-sharing schemes could contribute to

preventing major financial risks for Member States' and the Community budget, enhancing welfare of operators and providing incentives for prevention. Whether these benefits can be achieved in practice depends on the details of the operational principles to be defined at EU level and on their implementation at MS level.

However, a number of issues would require further ex-ante assessment to provide a sound basis for a harmonized system of cost-sharing schemes. These include:

- An assessment of possible principles for a comprehensive EU disease categorisation system and a related institutional mechanism at EU level to categorise the diseases and to regularly review categorization; This could include a definition of principles for assessing acceptable prevalence rates for publicly relevant diseases (see sections 5.4.4 and 5.5.2.3);
- A detailed feasibility analysis (including financial and legal aspects) of the institutional arrangements for cost-sharing schemes at the national or regional level and of options for public financial support to cost-sharing schemes, including the provision of contingent capital in case of catastrophic disease outbreaks (see sections 5.6, 5.7. and 5.8);
- An detailed assessment of “best practices” for setting up national or regional cost-sharing systems to develop guidelines for countries that currently do not have such a system (see sections 4 and 5.6);
- The development of guidelines for cost-sharing schemes to determine animal values, including the definition of animal types and commonly applied procedures for price monitoring (see sections 5.5.1.1 and 5.5.2.2).

Annex 1: Results of insurers' survey

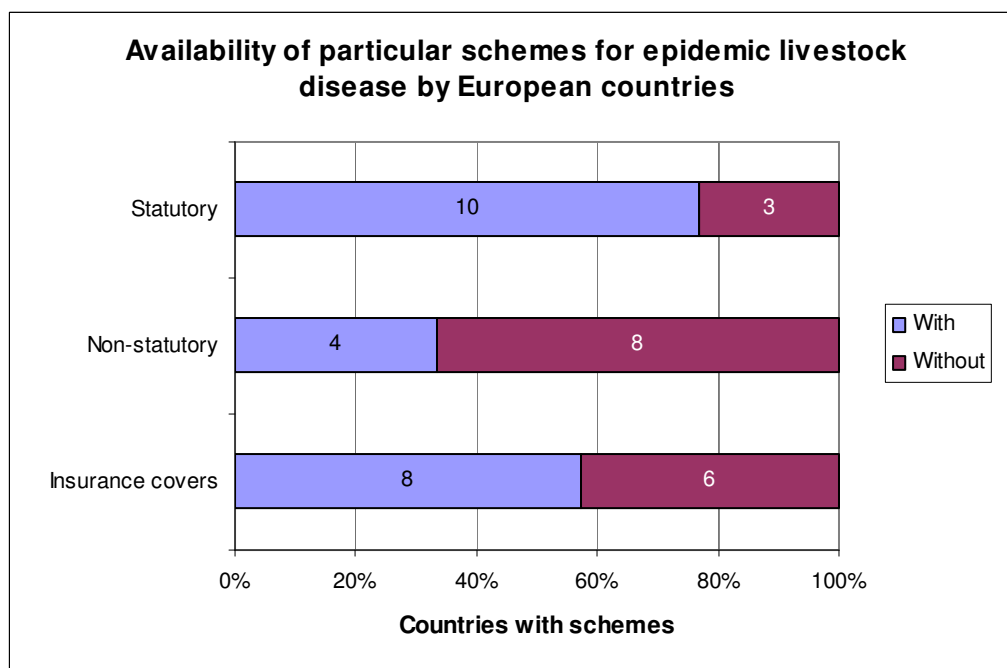
I. Introduction

Compensation schemes for epidemic livestock disease can be categorised generally into three different schemes, which are defined as follows:

- **Statutory compensation schemes:** Rules and procedures for compensating livestock owners are defined by legislation ex-ante (before the outbreak). Private insurers are not involved. Compulsory financial contribution of farmers for compensation payments is possible.
- **Non-statutory schemes:** Private risk-pooling schemes of farmers' associations without involvement of private insurers;
- **Insurance covers:** Private risk-transferring compensation schemes financed with or without public support by a large number of individuals who contribute to a common fund, which is used to cover the losses incurred by any individual in the pool.

The availability of these cost-sharing schemes in Europe can be seen below:

Figure 1: Compensation schemes in European countries for livestock disease



Source: Survey of insurers and national insurance associations

It is clear from this figure that in a majority of countries from which responses were received, some form of scheme addressing epidemic livestock diseases does exist. However, often coverage of epidemic diseases is not very comprehensive, as is detailed below.

II. Statutory Compensation Schemes

In the surveyed countries, all but three¹ have a statutory compensation scheme for farmers due to losses from epidemic livestock diseases; detailed information about such schemes in European countries, as reported by the survey of national insurance associations and insurers, can be found in *Table 12*. Table 1 below illustrates the types of statutory compensation schemes throughout Europe:

¹ Finland, France, and Greece; (Italy answered "Don't Know")

Table 1: Institutional set-up of statutory compensation schemes

	Name and (legal basis of scheme)	Type of Scheme	Financing of Scheme
AT	Law of epizootic diseases (RGGI 1909/ 177)	Public fund and regional fund	
BE	Sanitar fund (23-03-1998 Law)	Sector-wide fund	Primarily financed with complementary contributions from the farmers
CH	Tierseuchenkasse (Swiss Federal Law of Agriculture)	Sector-wide fund	Contributions from producers with state-aid
	Act on epizootic disease (Regulation on epizootic disease)	There are livestock insurance desks in every canton in Switzerland	Livestock owners and livestock dealers pay charges to these insurance desks. In case of an area-wide outbreak of an epidemic disease Swiss Government would pay for the unfunded losses.
DE	Tierseuchenkassen der Bundesländer (Publicly legal mechanism of the Bundesländer)	Öffentlich rechtliche Einrichtung der Bundesländer. Staatlich gestützter und verwalteter Umlageverbund	Für alle Tierhalter gesetzlich verpflichtend. Finanzierung: 50 % Tierhalter und 50 % Bundesländer
ES	(The scheme is managed by the State through the Ministry of Agriculture, Fisheries and Food)	It is a scheme based in aids for the slaughtering of animals	Financed by the government
UK	Animal Health Act		It is financed by the government
NL	Animal Health Funds (Animal Health and Well Being Law)	Sector-wide	Ultimately financed by all the farmers until a maximum per sector. It is a fund concerning cattle, pigs, poultry, sheep and goat. It is financed by farmers through levies on the production of milk, meat etc. When the costs of suppression of an epidemic break a certain level, agreed in advance, the government will carry the costs.
NO	Statens Erstatningsordninger (The government compensation system)	National	Financed by the government
PT	(Established by legislation published by the Portuguese Ministry of Agriculture)		The Portuguese Government supports pluri-annual plans co-financed by the European Union, for the control, eradication and surveillance of animal diseases.
SE	"Epizootilagen" (law of epizootic diseases)	The scheme covers epidemic diseases for all kinds of animals and all production purposes	State financed

Source: Survey of insurers and national insurance associations

Generally statutory compensation schemes can be classified into one of three categories: (1) public funds; (2) sector wide funds; and (3) regional funds (see *Table 1*). There are also various combinations of financing methods for statutory schemes ranging from high levels of governmental support to high levels of financial participation from the stakeholders.

Diseases covered by the statutory compensation scheme

From *Table 2*, it is clear that all statutory compensation schemes mostly cover all major diseases with a greater part of the countries explicitly listing highly infectious diseases such as Foot-and-Mouth Disease (FMD), Classical Swine Fever (CSF), and Avian Influenza (AI).

Table 2: Epidemic livestock disease coverage in statutory compensation schemes in Europe

	Diseases Covered
AT	Epizootic diseases like FMD, swine fever, BSE, poultry plague, mange, anthrax, etc.
BE	FMD; Vesicular stomatitis; Swine vesicular disease; Rinderpest; Peste des petits ruminants; Contagious bovine pleuropneumonia; Lumpy skin disease; Rift Valley fever; Bluetongue; Sheep pox and goat pox; African horse sickness; African swine fever; CSF; Highly pathogenic avian Influenza; Newcastle disease
CH	All major diseases
	The diseases mentioned in art. 2 and 3 of the regulation on epizootic diseases are fully covered by the statutory compensation scheme. The ones mentioned in art. 4 are partly covered, the ones in art. 5 not at all.
DE	Anzeigepflichtige Tierseuchen gemäß "Verordnung über anzeigepflichtige Tierseuchen" (Bekanntmachung der Neufassung vom 03.11.2004, Bundesgesetzblatt I S. 2764)
ES	All the epidemic diseases that require slaughtering of animals of the farm or require slaughtering for sanitary health reasons (e.g. Tuberculosis, Brucellosis, blue tongue)
	Generally, all epizootics will be included within the statutory compensation scheme. These measures to compensate eradication costs are already established for those diseases with confirmed positive cases in Spain.
UK	FMD, CSF, BSE, Enzootic Bovine Leucosis, Brucellosis, Tuberculosis, Swine vesicular disease, etc.
NL	Most of the infectious and zoonotic diseases like FMD, CSF, ASF, SVD, AI, NCD, BSE, Scrapie, Tuberculosis, Brucellosis
	Avian influenza (AI), Pseudo Bird influenza (NCD), FMD, Swine fever, BSE, Scrapie, VSD, etc.
NO	The diseases considered as the most infectious/serious/epidemic/dangerous ones: FMD, African pest (bloodstock and pigs), CSF, Avian Influenza, bluetongue, anthrax, Newcastle disease, infectious bladder-rash on pig, and TGE.
PT	Subject to eradication and surveillance programs: Bovine brucellosis; Caprine and ovine brucellosis; Bovine tuberculosis; Enzootic bovine leucosis; African and Classic swine fevers; Bluetongue; Newcastle disease. Subject to surveillance programs: Bovine spongiform encephalopathy; Contagious bovine pleuropneumonia; Avian influenza; Rabies.
SE	Serious diseases included in OIE's A-list, diseases covered by European legislation, and some other diseases of Swedish priority. In addition, Salmonella is covered

Source: Survey of insurers and national insurance associations

Costs covered by the statutory compensation scheme

Table 3 provides insight into compensation of direct losses covered by the statutory schemes in the event of an outbreak of the above-mentioned diseases:

Table 3: Direct costs covered by statutory schemes in European countries

	Direct losses covered by the statutory scheme
AT	The payment from the public fund system includes compensation of losses after death by epizootic diseases death in consequence of governmental command, vaccination, governmental command of killing, costs for monitoring and control The regional measures (cadaver disposal) are paid from the regional government
BE	Value of livestock
CH	Value of livestock, culling
	Value of livestock the value will be estimated; an upper level is fixed in the regulation (art. 75)
DE	Gemeiner Tierwert, d.h. der Verkehrswert der Tiere (wird von jeder einzelnen Tierseuchenkasse selbst festgelegt) sowie die Kosten für die Tötung und Beseitigung der Tiere
ES	These aids cover the value of the animal. The Ministry of Agriculture, Fisheries and Food establishes by law the compensation value for animals and diseases
	Standard value of livestock
UK	It varies according to the disease, value of livestock or a percentage of the value of the livestock. Culling and rendering costs are also paid for by the government

NL	Value of culled animals, infected feed and materials that cannot be disinfected. Costs of culling and rendering, diagnostics, transport to rendering plant, and other costs of combating the outbreak will be paid by the government and ultimately financed by the farmers to a maximum per sector
	Covered Costs are: Preventive actions in case of an emergency; Costs of suppression (culling, destruction, disinfection, etc.) Livestock value
NO	Direct losses as mentioned above (value of livestock, culling and rendering costs) are covered
PT	Value of livestock, loss of income and stock replacement costs
SE	Value of livestock, costs for decontamination

Source: Survey of insurers and national insurance associations

According to survey responses, all available statutory schemes indemnify the value of livestock and a majority of countries (7) explicitly mention that the costs associated with culling are also covered. Further compensation for other direct losses is relatively scarce; survey respondents indicate that only a few countries cover monitoring and control or losses from infected feed or materials.

Coverage of consequential losses is significantly less thorough than coverage of direct losses in the statutory compensation schemes as can be seen in Table 4.

Table 4: Consequential costs covered by statutory schemes in European countries

	Consequential losses covered by statutory schemes
AT	Yes interruption of production, costs for vets/medicines
BE	General principle: none. One exception: AVI 2003 (compensation for economic loss: law 22 December 2003, article 213 tot 217, Commission Regulation (EC) No 1499/2004 of 24 August 2004 on certain exceptional market support measures for eggs in Belgium
CH	Costs for vets and medicines, safety measures
	Costs for vets/medicines, laboratory tests are covered. Interruption of production is not covered
DE	No
ES	No
	No
UK	None
NL	Consequential losses will not be financed or subsidised by the government
	None
NO	Consequential losses caused by governmental restrictions are covered, except interruption of production
PT	No costs covered
SE	Reduction of animal value and production loss. Full compensation for production losses for Swine pest, BSE, Swine vesicular disease, Foot and mouth disease, 50 % compensation for other diseases

Source: Survey of insurers and national insurance associations

Though insurers from 5 countries do indicate that some consequential losses are compensated for, complete coverage of all losses due to an epidemic outbreak is clearly not covered in any statutory scheme. Coverage for prevention costs (see *Table 12*) is similarly rather limited; insurers of only 3 countries² indicate that the statutory compensation scheme covers prevention costs while at least for 5 countries it is explicitly stated that prevention costs are not compensated. All of these schemes were reported to cover solely the livestock owners and no compensation is provided to third party

² Austria, Switzerland, Germany

stakeholders. Non-statutory schemes and insurance markets in these countries often complement the statutory schemes in compensating farmers for several additional losses.

III. Non-statutory compensation schemes

Non-statutory compensation schemes without involvement of private insurers (e.g., private schemes of farmers' associations) are considerably less prevalent in Europe. Only from Austria, Germany, Spain, and the Netherlands were such schemes reported. An overview is presented in *Table 5*:

Table 5: Institutional set-up of non-statutory compensation schemes without involvement of private insurers

	Name and legal basis of scheme	Type of Scheme	Financing of Scheme
AT	There are some small regional organised pools	Mutual pools	Financed by the farmers and co-financed by the regional community.
DE	Bayern: MKS-Fonds des Bauernverbandes	Fonds	Finanziert durch Beiträge
ES	Livestock Owners Cooperatives	Mutual Pools	It is financed through the livestock owners' monetary contributions as per animal they own. A pool for contingencies is generated (not only for animal diseases)
NL	OWM Porcopol BA, OWM Avipol BA	Mutuals, founded by groups of farmers	Financed by the premium farmers have to pay

Source: Survey of insurers and national insurance associations

Non-statutory compensation schemes described by the survey of national insurance associations are mainly characterised as pools. Generally, all schemes are primarily financed by contributions from the farmers with only the Austrian national insurance association explicitly stating that their scheme receives funds additional to those contributed by the farmers. The schemes provide disease coverage as is laid out in *Table 6*:

Table 6: Disease coverage of non-statutory schemes without involvement of private insurers

	What epidemic livestock diseases are covered by the various schemes	Which direct losses are covered	Which consequential losses are covered	Prevention of epidemics
AT	Epidemic diseases for cattle	Not compensated	Costs for medicines and safety measures	Yes
DE	Foot and Mouth Disease	Not compensated	Bis zu 80 % des Milchgeldausfalls	
ES	Internally decided, varying	Internally decided, varying	Internally decided, varying	No, as a standard rule, but it is dependant on internal regulation.
NL	Aujeski (swine), Salmonella and MG (poultry)	Value of livestock (both swine and poultry) and the cost of necessary medical treatment (just for poultry)	Not compensated	No

Source: Survey of insurers and national insurance associations

These non-statutory schemes are aimed at very specific disease coverage, as all schemes only cover a limited number of epidemic diseases; the exception is Spain where insurers reported the coverage of diseases are based on internal decisions and disease coverage varies. The schemes vary in their coverage of either direct or consequential losses and only in Austria was it reported that

supplementary compensation for prevention costs is typically provided. As in the statutory compensation schemes, solely livestock owners are compensated by all of these schemes.

IV. Insurance Schemes for Livestock Related Risks

General agricultural insurance is widespread in the EU, though it varies significantly among countries, in levels of government support, and in the specific production perils covered. The following table gives an overview of European countries and their insurance markets as they relate to livestock risks:

Table 7: Available insurance cover for livestock related risk

	What are the risks covered by the insurance	For which animal diseases is insurance cover available?	Are epidemic livestock diseases defined in the insurance as a non-covered risk?
AT	Stillbirth and death	Cattle	Yes
BE	Accident, disease, chronic lameness	Cattle, horses	Epizootic diseases under a governmental animal health management plan
CH	Death as a result of diseases and accidents	All acute life-threatening diseases	Yes
	Fire, natural damages, accident, diseases	All diseases that are not explicitly excluded. Excluded are epidemic diseases (IBR/IPV, foot and mouth disease) and genetic defaulture.	Yes, but they can be covered by supplementary cover and with extra premium.
DE	Tod, Nottötung nach Unfall oder Krankheit durch anzeigepflichtige Tierseuchen gemäß "Verordnung über anzeigepflichtige Tierseuchen" (Bekanntmachung der Neufassung vom 03.11.2004, Bundesgesetzblatt I S. 2764) und auch andere übertragbare Tierkrankheiten - Diebstahl - dauernde Unbrauchbarkeit und Zuchtuntauglichkeit	Rind, Schwein, Geflügel: anzeigepflichtige Tierseuchen gemäß "Verordnung über anzeigepflichtige Tierseuchen" (Bekanntmachung der Neufassung vom 03.11.2004, Bundesgesetzblatt I S. 2764) und auch andere übertragbare Tierkrankheiten	No
ES	Death, obligatory slaughter and incapacity or loss of specific function of the animal caused by accidents or illness.	Cattle Factory fattening: All diseases that cause death of animals except those included in the OIE Lists A or B except anthrax and bovine respiratory syndrome. Cattle breeding: All diseases that cause death or loss of function of animals (included BSE) except epizooties.	Yes
	Additional to AGROSEGURO products, the private market offers (MAPFRE) as at 2005:- Perish or necessary slaughter of animals as a result of an accident - Loss of production as a result of necessary slaughter following an accident - Loss of production as a result of enforced slaughter as a result of named epizooties	Cattle - Loss of production (in terms of milk or calves) as a result of slaughter following Brucellosis (BCL), Leucosis, Tuberculosis (TBL), Contagious bovine pleuropneumonia, Bovine Spongiform Encephalopathy (BSE). - High value animals' cover: Difference between Ministry of Agriculture compensation and additional investment to enhance livestock (i.e. genetic improvement). - Swine - Loss of production (activity interruption) following Swine Fever (Classic or African). - Horses - Slaughter following African Horse Sickness.	Yes, the epizooties are excluded as per default. Those that are insured are "named covers".
FI	Feed manufacturer's product liability risk	Livestock diseases which have a causal connection to defective feed	Yes
FR	Mortalité des animaux (hors		

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	maladies contagieuses) pour les bovins, ovins, caprins, équins, félins, canins et porcins - Accidents d'élevages industriels (hors maladies contagieuses) pour les avicoles, porcins et jeunes bovins		
UK	Livestock mortality- loss of animal and loss of use covers for individual animals. Fire, lightning, aircraft and electrocution, malicious damage, impact, theft, transit, straying and worrying are all perils for herds/flocks of animals	FMD - all cloven hooved animals, CSF - pigs, Bovine tuberculosis - cattle, Brucellosis - cattle, Other insurance companies may well provide cover for other livestock diseases such as swine vesicular disease, anthrax, Aujeszky's disease.	Cover only applies for each specified disease, there is therefore no exclusion of epidemic livestock diseases
GR	Mortality risk	All diseases apart from epidemics and few exclusions, named in each type of policies	Yes
IT	Mortalite	Maladie commune et contagieuse, accident pour les animaux bovins et chevalins	On exclut les maladies pour lesquelles, dans le cas d'un abattage force suivant une epidemie, il y a une intervention des institutions publiques (etat, regions, provinces)
	mortalita	1) malattia comune e contagiosa, 2) bovini-ovini-caprini	No
NL	Accident and diseases	All cattle diseases, except those for which a compensation scheme exists managed by the authorities	Yes all diseases which are covered by a compensation scheme managed by the authorities
	Non-epidemic diseases and optional consequential losses in case of an epidemic disease.	Cattle	Yes
NO	Fire, other accidents and livestock diseases.	All diseases that lead to loss of production	No, epidemic diseases are included in the insurance cover as well, but insurance doesn't cover what the statutory compensation scheme covers (direct losses and most consequential losses except interruption of production caused by "A" diseases, see question 1)
PT	Death caused by accident or disease, sudden death, emergency slaughtering and theft of animals	Cattle, sheep, goat and swine diseases	Although the insurance policies cover the risk of death due to animal diseases, epidemic diseases (meaning those for which the sanitary authorities declare the compulsory slaughter of the animals) are excluded
SE	Life insurance, milk production loss, veterinary charges	All diseases, except for some epizootic diseases.	The epizootic diseases covered by the insurance is specified in the insurance policy

Source: Survey of insurers and national insurance associations

All countries surveyed do have insurance products on the market for livestock related risks; these cover mostly death and loss of production due to accidents and non-epidemic diseases. As can be seen in the table above, more often than not epidemic diseases are excluded in these covers. Moreover, the market for insurance products for epidemic livestock disease is significantly smaller in comparison to general livestock insurance markets.

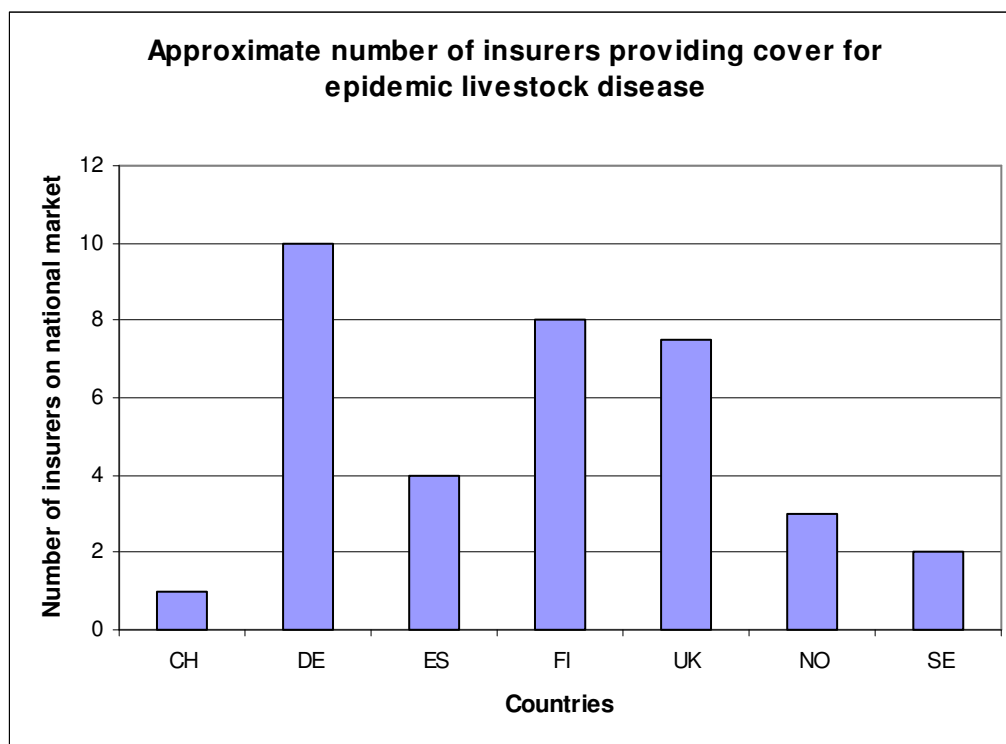
V. Insurance Schemes for Epidemic Livestock Disease

Market characteristics of epidemic livestock disease coverage

Only in 8 of the responding countries³ insurers offer covers for epidemic livestock diseases, the majority of which were offered in countries where statutory schemes for epidemic livestock diseases exist.

Estimates on the number of insurers providing cover for epidemic livestock disease can be seen in the follow graph:

Figure 2: Insurance providers of epidemic livestock disease in Europe



Source: Survey of insurers and national insurance associations

The previous graph shows insurance companies in national markets ranging from 1 (as in Switzerland) to approximately 10 (as in Germany). Survey responses to a question concerning the approximate market share of epidemic livestock disease insurance were sparse (see *Table 14*); however, Finnish insurers estimated that 70 per cent of their market was insured for this kind of cover and the Norwegian insurer Gjensidige estimated that they “have 75% agricultural market share. Of the cattle insured in our company, 80% have disease cover, 65% of the pigs have, and 85% of the poultry and less than 10% of the sheep.” Few national insurance associations were able to provide information about the approximate number of farmers and type of livestock presently insured; however, the following information was available:

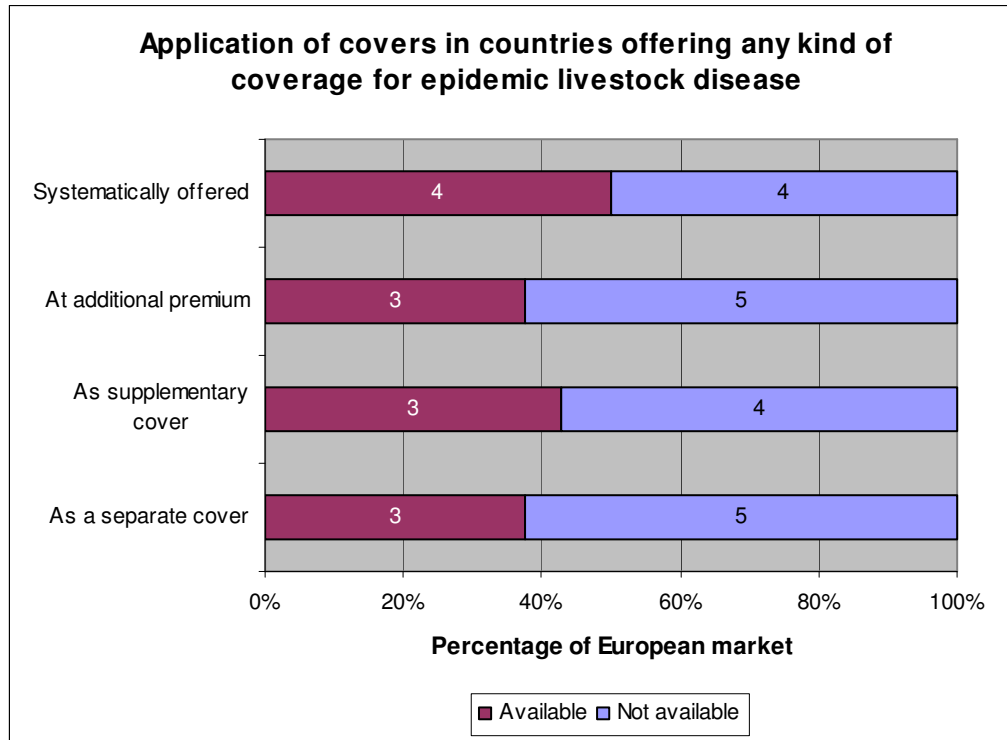
- Finland: About 20,000 farms;
- UK: Numbers of farmers for the diseases specified: FMD (5,058) for cattle, sheep, pigs; Tuberculosis (7,729) for cattle; Brucellosis (6,072) for cattle; CSF (90) for pigs;
- Norway: Livestock in 16,000 cattle farms, 2,300 pig farms, 1,200 poultry farms, less than 1,000 sheep farms.

³ Finland, Germany, UK, Italy, Norway, Spain, Sweden, and Switzerland

Contractual elements of epidemic livestock disease covers

Within the 8 countries that offer insurance for epidemic livestock disease, there exists a significant difference in the way that coverage is achieved, as can be seen in the following table:

Figure 3: Insurance products available in Europe



Source: Survey of insurers and national insurance associations

Insurance schemes for epidemic livestock disease are reportedly only systematically offered with non-specialized cover in Germany, UK, Norway and Sweden. Other countries, though they do not offer it systematically, offer coverage for epidemic diseases at an additional premium, as a supplementary cover, or as a separately covered product (these countries include Finland, Italy, Spain, and Switzerland).

Disease coverage in insurance markets

Countries that were able to report that they offer coverage for epidemic livestock diseases range in coverage from few to many diseases or are related to only a select number of animal species rather than a general coverage of epidemic livestock disease risk. Available coverage for epidemic livestock disease can be seen in Table 8:

Table 8: Available epidemic livestock disease insurance covers

Epidemic livestock diseases covered	
CH	IBR/IPV, FMD
DE	Tierseuchen gemäß "Verordnung über anzeichspflichtige Tierseuchen" (Bekanntmachung der Neufassung vom 03.11.2004, Bundesgesetzblatt I S. 2764)

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ES	Brucellosis (BCL), Leucosis, Tuberculosis (TBL), Contagious bovine pleuropneumonia, Bovine Spongiform Encephalopathy (BSE), Swine Fever (Classic or African), African Horse Sickness
FI	Salmonella in cattle, fattening poultry and pigs as well as PRRS disease, enzootic pneumonia, pig dysentery, atrophic rhinitis and mange in pigs.
UK	FMD - all cloven hooved animals, CSF - pigs, Bovine tuberculosis - cattle, Brucellosis - cattle
IT	per quanto a nostra conoscenza; afta; brucellosi, leucosi, tubercolosi, BVD, MD; bovini, ovini, caprini
NO	All
SE	Bovine - Tuberculosis and Paratuberculosis, FMD, Cattle pest, Malignant catarrhal fever, Anthrax; Poultry - New Castle and AI; Sheep - Tuberculosis and Paratuberculosis, FMD, Anthrax and Maedi-visna. Swine - FMD, Swine pest and Anthrax

Source: Survey of insurers and national insurance associations

In all of these schemes, several of the most contagious diseases are covered (such as FMD which is covered by nearly all schemes). Insurance products covering other diseases can be relatively limited to a very specific, definitive list of diseases or they can be quite comprehensive (such as the case in Germany and Norway).

An overview of the costs covered by these insurance products for epidemic livestock disease can be seen in Table 9:

Table 9: Insurance products for epidemic livestock disease

	Included direct costs	Basis for indemnification of direct losses	Included Consequential losses	Basis for indemnification for consequential losses	What losses are not indemnified
CH	Market value of livestock, maxima the sum insured	Market value of livestock, maxima the sum insured	None	Not applicable	Genetic defailure, costs for vets/medicine, transports, salvage expenses, slaughter, impotence or sterility
DE	Lt. individueller Vertragsbedingungen, z.B. Wiederbeschaffung toter bzw. getöteter Tiere, Kosten für Tötung und Beseitigung der Tiere, Reinigungs- und Desinfektionskosten, Tierarzt- und Medikamentekosten	Lt. individueller Vertragsbedingungen, z.B. Wiederbeschaffungskosten für Tiere (bei gleichem Leistungsniveau) sowie Anzahl der betroffenen Tiere	Lt. individueller Vertragsbedingungen, z.B. -Verminderung des Deckungsbeitrages resultierend aus - Tierverlusten und/oder Verminderung der tierischen Produktionsleistung - Wertminderung tierischer Erzeugnisse - Unterbrechung des Produktionsverfahrens, Lieferverboten und Verkaufsbeschränkungen	Lt. individueller Vertragsbedingungen, z.B. - entstandener Deckungsbeitragsverlust für einen festgelegten Zeitraum, z.B. 12 Monate - oder pauschale Summen pro Woche oder Tag	Lt. individueller Vertragsbedingungen, z.B. Vergrößerung des Ertragsschadens - durch behördlich angeordnete Wiederaufbau- oder Betriebsbeschränkungen, soweit diese nicht durch versicherte Ereignisse verursacht sind - dadurch, dass dem Versicherungsnehmer zur Wiederherstellung oder Wiederbeschaffung zerstörter, beschädigter oder abhanden gekommener Sachen bzw. verletzter, verendeter oder getöteter Tiere nicht rechtzeitig genügend Kapital zur Verfügung steht
ES	Loss of production	Value of livestock and number of affected livestock		Stipulated production value * number of animals * months of paralization (limited to 4 months milk, 6 months fattening livestock and 1 month breeding livestock)	Lost of profit and state compensations
FI	Value of livestock		Loss of production can be compensated	Not applicable	

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			in certain situations		
UK	None		It does not indemnify the farmer for specific consequential losses. The claims payment is a contribution towards consequential losses, whatever they may be.	For FMD and CSF a percentage of government compensation is paid. The percentage is selected at inception of the policy by the farmer and it may not exceed 25%. Currently for brucellosis and tuberculosis an amount is paid per animal slaughtered by the government. This amount is chosen by the farmer at inception and should not exceed 25% of the value of the livestock.	Full loss of income
IT	Valeur de la tete de betail assuree	Valeur de la tete de betail assuree	Manque de production du lait et/ou de la viande.	Jours d'arret d'etabte, avec une limite dans le numero des jours par annee d'assurance etabli dans le contrat.	
NO	All mentioned above (value of livestock, culling and rendering costs) that in sum leads to loss of production	Value of livestock for animals that are insured	Reduction of animal value, interruption of production, movement and marketing restrictions, costs for vets/medicines, and safety measures	Accounting figures from the last 3 years without losses	None
SE	Value of livestock, milk production loss, and veterinary costs	Value of livestock multiplied by the number of affected livestock that qualify for insurance cover	Interruption of production	Actual losses	Costs unrelated to livestock production

Source: Survey of insurers and national insurance associations

As is indicated in the previous table, 7 out of the 8 countries where insurance covers for epidemic diseases are available cover direct losses and many cover some consequential losses as well; this generally seems to cover loss of production with additional losses covered in a few countries. All insurers in countries listed above impose some form of maximum compensation on their claims, either in monetary terms or in time limits.

Holder of the insurance policy

All insurance companies report that individual policies for livestock owners are available (see *Table 15*). In a couple cases, the policy was available for farmers' associations and other sector stakeholders (as in Finland and Spain).

Period of validity of cover

For a majority of the policies, the period of validity of the cover is one year (see *Table 15*). The only exceptions are in Germany (1-5 years of coverage) and in Switzerland (3 year coverage).

Exclusions included in contracts

Exclusions generally included in contracts seem to vary slightly among the European insurance markets (see *Table 15*). In some cases, common exclusions are, for example, diseases that were pre-existing, fraud, or natural disasters.

Deductible

Responding to a question about their insurance products, 5 out of 8 insurers said their products for epidemic livestock diseases involve a deductible. Of the policies with deductibles, two involve a percentage of the total losses, one involves fixed contracts, and one scheme offers both a fixed rate and a percentage of total losses (one did not reply).

According to the survey, only insurers in Italy explicitly stated that the government provided support to private epidemic livestock disease insurance (via subsidies for insurance premiums) whereas at least 9 countries stated that government does not provide support.⁴ support via subsidies for insurance premiums is also offered in Spain. However, in Spain only non-epidemic diseases are covered currently, with products covering FMD and Bluetongue being under development.

Obligations of the policyholder

According to survey responses (see *Table 15*), at least 3 insurance policies do not have specific obligatory preventive measures while 4 insurance policies do require specific measures for holders of the policies. The insurers in Norway do not oblige policyholders to maintain all standards but do offer a discount for those that practice additional preventive measures on their farms. Only in Finland did insurers seem to have obligatory preventive measures that were additional to legal requirements.

When asked about other, generalized obligations of the policyholders, 5 insurance companies and associations responding to the survey declared that they had additional obligations and 3 insurance organizations explicitly mentioned that they do not have additional obligations. Typically, the additional obligations of insurance organizations revolved around timely reporting of disease outbreak and various other hygienic and safety measures (see *Table 15*).

Enforcement of obligations of the insurance policies

Generally, veterinary authorities are responsible for confirming that the policyholder adheres to the obligations specified. Many of the insurance associations stated that adherence was only monitored in the case of a disease outbreak (see *Table 15*); only in Sweden did insurers state explicitly that it was checked on a regular basis (yearly). All the insurance associations except for Norway responded that if the authorities found the policyholder not to be in accordance with the obligations of the contract, they were penalized to some degree. In the case that policyholders were found to be negligent in reporting disease cases, penalties could range from exclusion of the control program (as in Sweden) to complete or partial reduction of indemnification (as in Switzerland and Spain) and other such measures.

Trigger of coverage

Responses defining the trigger of coverage (i.e. the criteria that must be fulfilled in order for the insurance to apply) generally fell into two categories of events or conditions that determine whether an insurance policy applies to a claim: (1) death or emergency slaughter; or (2) one case of outbreak. Both Switzerland and UK apply insurance coverage upon the event of death or emergency slaughter; Swiss insurers defined trigger of coverage as “death or emergency slaughter” and British insurers

⁴ Austria, Switzerland, Germany, Spain, Finland, UK, Greece, Norway, Sweden

defined trigger of coverage as “Animals must be slaughtered by the government to prevent the spread of the disease concerned.” Insurers in both Spain and Norway defined coverage as triggered by disease outbreak: Spanish insurers defined trigger of coverage as “Disease outbreak: one only notified case is enough” and Norwegian insurers defined it as “Accident or disease must be present and cause direct loss or/and loss of production (interruption).” The Swedish defined their coverage applicable when “Certificate [is] issued by a veterinary.”

V. Prospects for epidemic livestock disease insurance

Feasibility of future development of epidemic livestock disease insurance

When surveyed about the possibility of future insurance coverage for epidemic livestock diseases, opinions were split nearly evenly about whether this was a feasible area for development within the sector; 8 respondents were of the opinion that epidemic livestock disease insurance could be a growth segment in terms of future development for insurance companies and 9 respondents did not agree (*Table 16*). In *Table 10* are listed both pros and cons presented for development of these products:

Table 10: Reasons cited for and against future development of epidemic livestock disease insurance

European Insurer	Reasons for development	Reasons against development
AT: Österreichische Hagelversicherung		High risk concentration, regulated by the law of epizootic diseases, difficult to get reinsurance
BE: KBC Insurance	No competition with government support - Initiatives who make premiums acceptable for farmers - Initiatives who make insurance products profitable for insurance companies. Guarantees for a fair competition	
CH: Swiss Hail Insurance		Existing state-aided solution
CH: Swiss Mobiliar		Very small market, the number of farmers decreases consistently in Switzerland, the value of livestock decreases as well, there is only one insurer in Switzerland that offers such kind of cover
DE: GVD	Zunehmende Betriebsgrößen: betriebliches Wachstum führt zu steigendem Fremdkapitaleinsatz. Hierbei dient die Ertragsschadenversicherung dem Kreditgeber als Sicherungsinstrument - Steigendes Risikobewusstsein der Tierhalter mit zunehmender Spezialisierung - zunehmendes Risiko durch offene Grenzen innerhalb der EU und Globalisierung	
ES: Agroseguro	Because epidemic livestock diseases are becoming more common and more important each day, so the farmer needs tools for manage this problem, and one of the most interesting tools is the insurance for livestock epidemic diseases	
ES: MAPFRE	To comply with livestock owners concerns	
FI: Federation of Finish Insurance Companies		No (no reason stated)
FR: FFSA		L'impact des épizooties dépend d'actions collectives en matière de veille sanitaire et de prophylaxie dans les élevages. Ces mesures sont définies par les Pouvoirs Publics, par arrêtés ministériels sur la base de la réglementation définie au code rural. L'efficacité étant

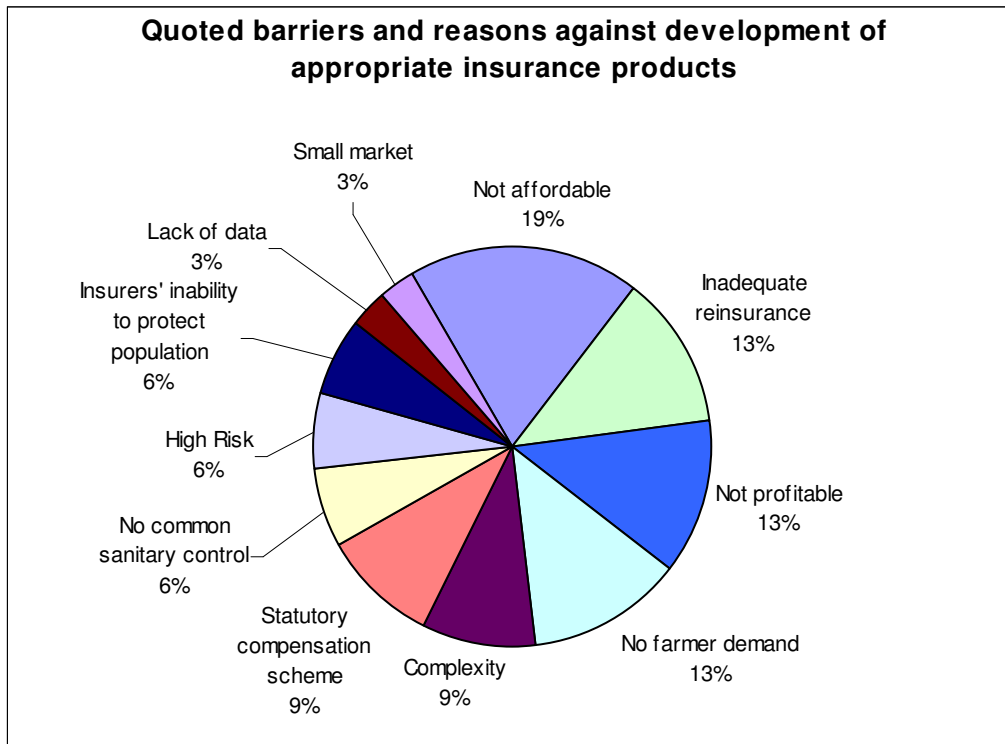
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		fortement dépendante de la rapidité et des moyens mis en œuvre, n'importe quel dysfonctionnement, même insignifiant, retire au risque son caractère aléatoire. Pour mémoire, les mesures de police sanitaire que les Pouvoirs Publics doivent engager afin d'éviter la propagation des épizooties sont définies au Titre deuxième du Livre II du code rural (lutte contre les maladies des animaux - articles L. 221-1 à L. 228-7).
UK: National Farmers Union Mutual Insurance Society Limited		The demand for the insurance of epidemic livestock diseases generally does not exist in this country. The demand only arises when the disease has come in to the country and then perhaps it would not be available. Farmers in general do not view it as an important (or an affordable) part of their farm insurances.
GR: Association of Insurance Companies	On the condition that the extent of state intervention will allow market development and there will be available satisfactory reinsurance. Farmers ask today for such insurance products because they believe that the state compensation is not always satisfactory	
IT: Società reale Mutua di Assicurazioni	La contribution de l'état sur le coût d'assurance peut représenter pour le secteur zootechnique pas seulement un efficace support mais aussi une opportunité pour le risk-management d'entreprise.	
IT: Gruppo Itas Assicurazioni		Settore produttivo in contrazione
NL: Verbond van Verzekeraars		It will never be a profitable product
NL: NV Interpolis Shade		It will never be a profitable product
NO: Gjensidige Forsikring	Increased risk for infectious diseases due to larger livestock production units and live animal transport/sales	
PT: APS	The insurers' know-how and expertise in the field of risk management and claims settlement may contribute to create and develop more efficient models of transferring financial aid from the European or National authorities to the livestock owners, within the scope of the plans for the control and eradication of animal diseases.	
SE: Agria Djurförsäkring AB	The number of infectious diseases is increasing as a consequence of more cross-border mobility. This leads to increasing need for insurance.	

Source: Survey of insurers and national insurance associations

The main reasons listed as possible barriers have been interpreted into the main categories seen below:

Figure 4: Barriers to the development of insurance products



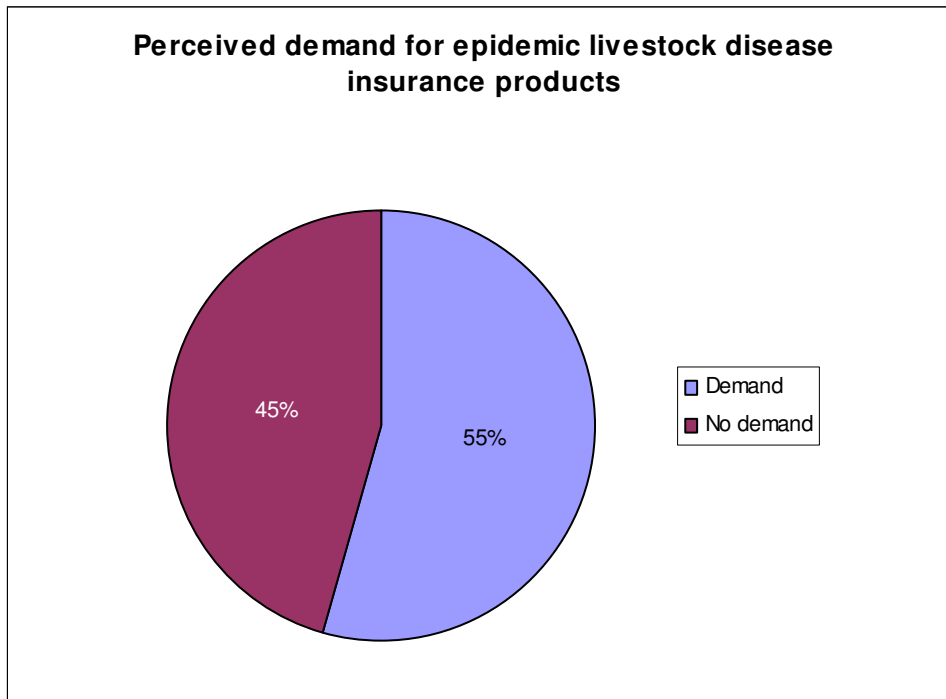
Source: Survey of insurers and national insurance associations

Barriers to development of a stronger insurance market given by the respondents varied widely but the most common concerns was that this product is: (1) not affordable; (2) not re-insurable; (3) not profitable; and (4) that there is no demand for such a product.

Demand for epidemic livestock disease products

However, as can be seen in the following graph, a small majority of respondents (6) reported that they perceive a demand for insurance products that is not currently satisfied on their market, while 5 responded that they did not perceive such a demand:

Figure 5: Demand for insurance products



Source: Survey of insurers and national insurance associations

Of the insurers that cited particular diseases in demand, all cited Avian Influenza as a product in demand. Professed reasons that demand for this disease was not yet satisfied was that there is potential for high losses and an inability to insure the risk associated with this product. Other diseases cited (particularly from Spain) were FMD, Aujeszky, and Brucellosis.

Measures to encourage development of insurance products

When asked what measures at the European and national levels could encourage the development of this market segment, insurance companies and national insurance associations offered significantly varying ideas for the most feasible ways to pursue these products as can be seen in *Table 11* below:

Table 11: Measures at European and national level to encourage development of insurance products

	Measures at the European level	Measures at the national level
AT	Harmonised schemes with private public partnership	Private public partnership (agriculture - insurance - government department)
BE	No competition with government support - Initiatives who make premiums acceptable for farmers - Initiatives who make insurance products profitable for insurance companies - Guarantees for a fair completion	See left column
CH		New legal basis without statutory compensation scheme
	Compulsory insurance	Compulsory insurance
DE	Europäisches Absicherungssystem in Verbindung zu nationalen Absicherungssystemen	Für ein flächendeckendes Versicherungsangebot unverzichtbar: 1. Beteiligung des Staates an einer nationalen Rückversicherungslösung (Layer-Modell oder Bildung eines vom Staat gespeisten und verbrieften Kapitalstocks, aus dem zu

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		günstigen Preisen Rückversicherungskapazitäten bereit gestellt werden) 2. staatliche Prämienbezuschung für Landwirte
ES	Historical and detailed data statistical series Funds to compensate the compulsory slaughtering to eradicate epidemics, complementary to insurance. Promotion campaigns of insurance as a tool to compensate and manage losses dues to epidemics.	Common sanitary control measures. Subsidized Insurance premiums. Adequate reinsurance for these products
	Sound long term and detailed statistics. - As a first step and complement to insurance, the promotion of funds to compensate the compulsory slaughter following eradicate diseases and epidemics. The private insurance will cover this "Difference In Conditions" and could enhance covers to accomplish the livestock owner needs. - Communication and information for prone insured. Promotion of insurance as a prevention measure.	- Diseases sanitary control. - Design of common products to be sold by the market. - Subsidized premiums.
FI		
FR		
UK	It would have to be made compulsory	It would have to be made compulsory
GR	European Reinsurance scheme, premium subsidies	Premium subsidy, less state intervention, state reinsurance cover
IT	Contribution plus importante sur les frais des primes.	contribution plus importante sur les frais des primes.
	Contributi pubblici sostanziosi sul premio di assicurazione	See left column
NL	Influence in the measures that have to be taken when an epidemic disease occurs. Give cover when the loss will exceed a certain amount. Make preventive actions possible e.g. marker vaccines.	See left column
	Influence in the measures that have to be taken when an epidemic disease occurs. Give cover when the loss will exceed a certain amount. Make preventive actions possible e.g. marker viruses.	See left column
NO	Reduction of transport and sales of life animals would make the risk more predictable, the risk for epidemics would be reduced. Reduction in the use of antibiotics to livestock which produce meat	See left column. Also increased Consumer demands to animal health and reduction in the use of antibiotics to livestock which produce food articles.
PT	To subsidize the cost of insurance taken out by livestock owners and to create an adequate protection system (reinsurance).	See left column
SE	Common epizootic legislation and increased control of livestock trade. Restrictions on mobility of livestock, quarantine regulation and prevention of smuggling.	Increased control of livestock trade. Restrictions on mobility of livestock, quarantine regulation and prevention of smuggling. Campaigns to increase knowledge of infection. Control of imported livestock. Improved health control programmes.

Source: Survey of insurers and national insurance associations

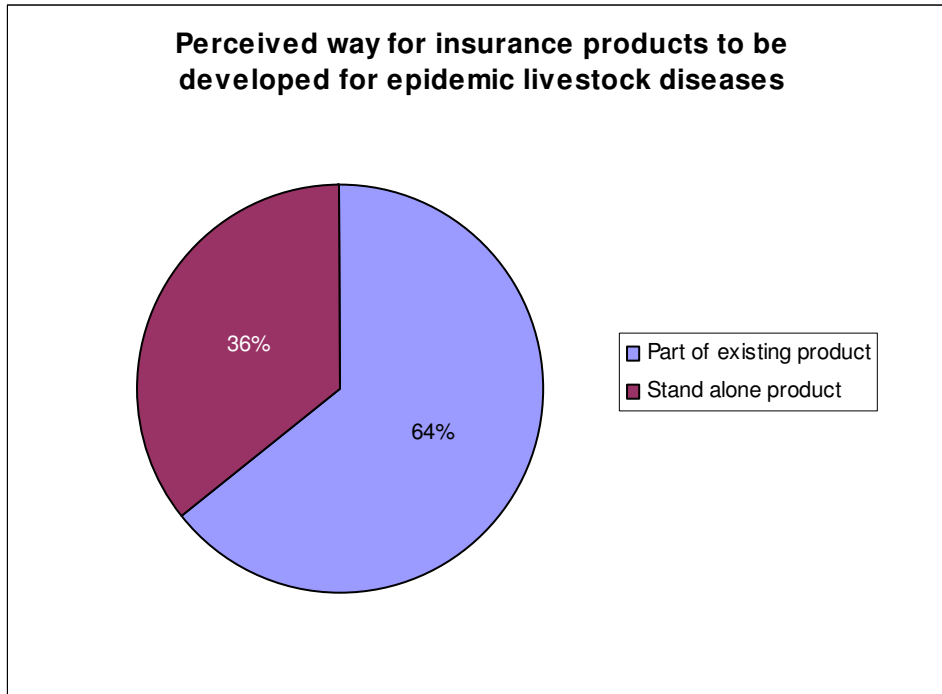
As can be seen in the table above, the most common suggestions for measures at the European level were European assistance to farmers in the form of: (1) subsidies for premiums; (2) compulsory insurance; (3) and support for a reinsurance system. Some companies seemed to support a degree of harmonization at the European level ranging from harmonized schemes to other less inclusive harmonized measures that need to be taken in the case of an epidemic outbreak.

Suggestions for development of an insurance market for epidemic livestock disease at the national level also varied. Notably, however, was a majority response that Member States should subsidize livestock owners' premiums in order to encourage the development of this market segment. Other prevalent suggestions included support for a national reinsurance program and less state intervention to allow for a competitive insurance market.

Type of product development in the future

When surveyed about the best way for the insurance products to be developed in the future, most insurance companies (9 insurers) responded that it should be developed as part of an existing product of livestock covers rather than as a stand-alone product (5 insurers):

Figure 6: Potential future insurance products



Source: Survey of insurers and national insurance associations

Table 12: Statutory compensation schemes for epidemic livestock diseases

MS	Name and legal basis of scheme	Type of scheme	Financer of scheme	Diseases covered	Direct losses covered	Covered consequential losses	Prevention of epidemics	Who is covered	Who administers the scheme
AT	Law of epizootic diseases (RGBI 1909/177)	Public fund and regional fund		Epizootic diseases like FMD, swine fever, BSE, poultry plague, mange, anthrax, etc.	Losses after death by epizootic disease, death in consequence of governmental command, vaccination, governmental command of killing, costs for monitoring and control. The regional measures (cadaver disposal) are paid from the regional government.	Interruption of production, costs for vets/medicines	Yes	Livestock owner	Regional Government
BE	Sanitar fund (23-03-1998 Law)	Sector-wide fund	Primarily financed by whom?? with complementary contributions from the farmers	FMD; Vesicular stomatitis; Swine vesicular disease; Rinderpest; Peste des petits ruminants; Contagious bovine pleuropneumonia; Lumpy skin disease; Rift Valley fever; Bluetongue; Sheep pox and goat pox; African horse sickness; African swine fever; Classical swine fever; Highly pathogenic avian Influenza; Newcastle disease	Value of livestock	Generally, none. With one exception (AVI 2003) compensation for economic loss on certain exception market support for eggs	None	Livestock owner	Federal government, Federal public service, health, food, chain safety and environment. Carried out by The Food Agency.
CH what is the difference between both schemes?	Tierseuchenkasse (Swiss Federal Law of Agriculture)	Sector-wide fund compulsory?	Contributions from producers with state-aid	All major diseases	Value of livestock, culling	Costs for vets and medicines, safety measures	Surveillance, vaccination, research	Livestock owner	Each canton has its own pool
	Act on epizootic disease (Regulation on epizootic disease)	There are livestock insurance desks in every canton in Switzerland	Livestock owners and livestock dealers pay charges to these insurance desks. In case of an area-wide outbreak of an epidemic disease Swiss Government would pay for the un-funded losses.	The diseases mentioned in art. 2 and 3 of the regulation on epizootic diseases are fully covered by the statutory compensation scheme. The ones mentioned in art. 4 are partly covered, the ones in art. 5 not at all.	Value of livestock the value will be estimated; an upper level is fixed in the regulation (art. 75).	Costs for vets/medicines, laboratory tests are covered	None	Livestock owner	The livestock cash desks which are controlled by the cantons.
DE	Tierseuchenkassen der	Öffentlich rechtliche	Für alle Tierhalter gesetzlich verpflichtend.	Anzeigepflichtige Tierseuchen gemäß "Verordnung über	Gemeiner Tierwert, d.h. der Verkehrswert der	None	Yes	Tierhalter	Tierseuchenkassen der

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	Bundesländer (Publicly legal mechanism of the Bundesländer)	Einrichtung der Bundesländer. Staatlich gestützter und verwalteter Umlageverbund	Finanzierung: 50 % Tierhalter und 50 % Bundesländer	anzeichpflichtige Tierseuchen" (Bekanntmachung der Neufassung vom 03.11.2004, Bundesgesetzblatt I S. 2764)	Tiere (wird von jeder einzelnen Tierseuchenkasse selbst festgelegt) sowie die Kosten für die Tötung und Beseitigung der Tiere				Bundesländer als Anstalten öffentlichen Rechts
DK	Governmental compensation: The State Treasury pays the farmer a compensation for slaughtering animals (e.g. in connection with mad cow disease and a large number of other diseases) and by destruction of eggs, milk and likewise animal products starting with the animals or the values of the products. However, in practice there is a maximum cap of compensation following the Danish law.								
ES what re the diffe renc es betw een both sche mes ?	(The scheme is managed by the State through the Ministry of Agriculture, Fisheries and Food)	It is a scheme based in aids to the slaughtering of animals	Financed by the government	All the epidemic diseases that require slaughtering of animals of the farm or require slaughtering for sanitary health reasons (e.g. Tuberculosis, brucellosis, blue tongue)	These aids cover the value of the animal.	None	If the State allows vaccination plans, there are aids for vaccination.	Livestock owner	Ministry of Agriculture, fisheries and food of Spain in collaboration with regional governments of Spain
				Generally, all epizootics will be included within the statutory compensation scheme. These measures to compensate eradication costs are already established for those diseases with confirmed positive cases in Spain.	Standard value of livestock	None	None	Livestock owner	Ministry of Agriculture
FI	Not applicable								No
FR	Not applicable								No
UK	Animal Health Act		It is financed by the government	Foot and mouth disease, Classical swine fever, BSE, Enzootic Bovine Leukosis, Brucellosis, Tuberculosis, Swine vesicular disease, etc.	Varies according to the disease: value of livestock or a percentage of the value of the livestock. Culling and rendering costs are also paid for by the government.	None	None	Livestock owner	Department of the Environment, Food and Rural Affairs, Scottish Executive Environment and Rural Affairs Department, Department of Agriculture and Rural Development Northern

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									Ireland, National Assembly for Wales
GR	Not applicable								
IT	Answered "don't know"								
NL	Gezondheids- en welzijnswet voor dieren (Animal Health and Well Being Law)	Sector-wide	Ultimately financed by all the farmers until a maximum per sector. It is a fund concerning cattle, pigs, poultry, sheep and goat. It is financed by farmers through levies on the production of milk, meat etc. When the costs of suppression of an epidemic break a certain level, agreed in advance, the government will carry the costs above the maximum of the sector.	Most of the infectious and zoonotic diseases like FMD, CSF, ASF, SVD, AI, NCD, BSE, Scrapie, Tuberculosis, Brucellosis	Value of culled animals, infected feed and materials that cannot be disinfected. Costs of culling and rendering, diagnostics, transport to rendering plant, and other costs of combating the outbreak will be paid by the government and ultimately financed by the farmers to a maximum per sector.	None	None	Livestock owner	Ministry of agriculture, nature and food quality (Ministerie van LNV)
	The Animal health funds (Legally based within the Animal Health and well being law)	It is a fund for epidemical livestock diseases concerning cattle, pigs, poultry (chicken, ducks, geese, turkey) sheep and goat.	It is financed by farmers through levies on the production. When the costs of suppression of an epidemic outbreak reach a certain, in advance agreed level, the government will carry the costs.	Bird influenza (AI), Pseudo Birdinfluenza (NCD) , FMD, Swinefevert, BSE, Scrapie, VSD, etc.	Preventive actions in case of an emergency; Costs of suppression (culling, destruction, disinfection etc.) Livestock value	None	Vaccination, tracking and tracing in case of an outbreak	Livestock owner (loss of value), Governme nt (costs they incur)	Product Boards for Livestock, Meat and Eggs (PVE) and the Product Boards for Dairy (PZ) Dutch Dairy Board
NO	Statens Erstatningsord ninger (The government compensation system)	National	Financed by the government	The diseases considered as the most infectious/serious/epidemic/danger ous ones: FMD, African pest (bloodstock and pigs), CSF, Avian Influenza, bluetongue, anthrax, Newcastle disease, infectious bladder-rash on pig, and TGE.	Value of livestock, culling and rendering costs	Consequential losses caused by governmental restrictions are covered, except interruption of production.	Prevention of epidemics (understood as prevention when there's no proved existence of disease) isn't covered by the scheme.	Livestock owner	Statens landbruksforval tning
PT	(Established by legislation		The Portuguese Government supports	Subject to eradication and surveillance programs: Bovine	Value of livestock, loss of income and stock	None	Vaccination campaigns,	Livestock owner	IFADAP

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	published by the Portuguese Ministry of Agriculture)		pluri-annual plans co-financed by the European Union, for the control, eradication and surveillance of animal diseases.	brucellosis; Caprine and ovine brucellosis; Bovine tuberculosis; Enzootic bovine leukosis; African and Classic swine fevers; Bluetongue; Newcastle disease. Subject to surveillance programs: Bovine spongiform encephalopathy; Contagious bovine pleuropneumonia; Avian influenza; Rabies.	replacement costs.		laboratory analysis, transport and slaughtering of sick animals, within the scope of national plans for the control and eradication of animal diseases.		
SE	"Epizootilagen" (law of epizootic diseases)	The scheme covers epidemic diseases for all kinds of animals and all production purposes	State financed	Serious diseases included in OIE's A-list, diseases covered by European legislation, and some other diseases of Swedish priority. In addition, Salmonella is covered	Value of livestock, costs for decontamination.	Reduction of animal value and production loss. Full compensation for production losses for Swine pest, BSE, Swine vesicular disease, Foot and mouth disease, 50 % compensation for other diseases	Costs for slaughter of livestock is compensated, if mandated by the authorities	Livestock owner	Jordbruksverket (Swedish Board of Agriculture)

Table 13: Non-statutory compensation schemes for epidemic livestock diseases

MS	Name and legal basis of scheme	Type of scheme	Financer of scheme	Diseases covered	Direct losses covered	Covered consequential losses	Prevention of epidemics	Who is covered	Who administers the scheme
AT	There are some small regional organised pools	Mutual pools	Financed by the farmers and co-financed by the regional community.	Epidemic livestock disease by cattle	Losses are not covered by the law of epizootic diseases	Costs for medicines and safety measures	Yes	Only the livestock owners	The mutual pool owners
BE	Not applicable								
CH	Not applicable								
	Ad-hoc payment in case of hard-ship								
DE	Bayern: MKS-Fonds des Bauernverbandes	Fonds	finanziert durch Beiträge	MKS		Bis zu 80 % des Milchgeldausfalls		Tierhalter	Bayerischer Milchförderfonds
ES	Don't Know								
	Livestock Owners Cooperatives. We ignore the legal basis	Mutual Pools	It is financed through the livestock owners monetary contributions as per animal they own. A pool for contingencies is generated (not only for animal diseases)	Internal regulation and decision.	Internal regulation and decision	Internal regulation and decision	No, as a standard rule, but it is dependant on internal regulation	Livestock owners	Democratically elected
FI	Not applicable								
FR	Not applicable								
UK	Don't Know								
GR	Not applicable								
IT	Don't Know								
	Don't Know								
NL	Not applicable								
	OWM Porcopol BA, OWM Avipol BA	Mutuals, founded by groups of farmers.	Financed by the premium they have to pay.	Porcopol: Aujeski, Avipol: Salmonella and MG	Value of livestock (Porcopol and Avipol) and the cost of necessary medical treatment (Avipol)	None	None	Livestock owners	Porcopol (NV Interpolis) and Avipol (PVE)
NO	Not applicable								
PT	Not applicable								

SE	Not applicable								
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Table 14: Market situation for insurance covers for epidemic livestock disease

	Available insurance covers for epidemic livestock diseases	Definition, if any, of epidemic livestock disease used in the insurance.	Approximate market share of insurance (insured/ total)	Approximate number of insurers providing this cover presently	Approximate number of farmers and number and type of livestock insured presently	Total premium income received for epidemic livestock disease cover in each of the years 2000-2004 (in Euro)	Most significant claims against epidemic livestock disease cover in the period 2000-2004 (in Euro)
AT	No						
BE	No						
CH	No						
CH	Yes	There is no definition used in the insurance. Coverage is only available for IBR/IPV and foot and mouth disease	Don't know	Don't know	Don't know	Don't know	Don't know
DE	Yes	Definition gemäß "Verordnung über anzeigepflichtige Tierseuchen" (Bekanntmachung der Neufassung vom 03.11.2004, Bundesgesetzblatt I S. 2764)	Differenzierte statistische Angaben z.B. nach Tierarten bzw. nach Krankheiten oder Seuchen liegen nicht vor.	Ca. 10 Marktteilnehmer. Angaben zu einzelnen Angeboten und Produkten liegen nicht vor.	Differenzierte statistische Angaben liegen nicht vor.	Differenzierte statistische Angaben liegen nicht vor.	BSE und Schweinepest. Differenzierte statistische Angaben liegen nicht vor.
ES	No						
ES	No	This definition is included in the General Conditions of MAPFRE Livestock Insurance (free translation): EPIZOOTIE: Infectious or parasitic disease that might affect a great number of animals in a short period of time at high speed. Epizooties are those Officially Declared by the OIE (Office Internationale des Epizooties), liable for notification and the ones so classified by the Government Veterinary Authority	Not applicable	MAPFRE and three other insurance companies	Not applicable	Enclosed below data as available. No split as per disease. Figures for swine and horses are negligible. Figures for bovine meat also negligible and so included in these below: BOVINES 2000: 513.342, 2001: 433.474, 2002: 405.699, 2003: 437.320, 2004: 536.462 Note: In 2002, a new product for epidemic livestock diseases was launched within state pool system. In 2003, MAPFRE launched a new product as described in question 2	Enclosed below data as available. Figures for swine and horses are negligible. BOVINES 2000: BCL 477.867, TBL 77.604. TOTAL 2000: 555.471. 2001: BCL 360.524 (10 stamping-out, following) TBL 26.912 (1 stamping-out, following). TOTAL 2001: 387.436, 2002: BCL 128.489 (4stamping-out, following), TBC 63.574 (1 stamping-out, following), TBC 31.461 (spare cases). TOTAL 2002: 223.524, 2003: BCL 186.870 (3 stamping-out, following), TBC 47.724 (1 stamping-out, following), TOTAL 2003: 234.594, 2004: BCL 85.836 (1 stamping-out, following), TBC 61.753 (3 spare cases), TOTAL 2004: 147.589. Note: In 2002, a new product for epidemic livestock diseases was launched within Agrosseguro pool system. In

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							2003, MAPFRE launched a new product as described in question 2
FI	Yes	Livestock diseases are specified separately. There is no general definition.	70%	8	About 20,000 farms	€1m in 2000, €0.7m in 2001, €0.8m in 2002, €0.8m in 2003, €1m in 2004	240.000 euros (salmonella) and 64.000 euros (enzootic pneumonia)
FR	No						
UK	Yes	There is no definition of epidemic livestock diseases; cover applies for the specified disease only.	Don't know	Approximately 5-10 insurers provide cover for livestock diseases in the same way as NFU Mutual i.e. each disease is an individual cover and the customer selects which cover(s) he wants.	NFU Mutual currently insures the following numbers of farmers for the diseases specified: Foot and Mouth - 5058 - Cattle, sheep, pigs, Bovine Tuberculosis - 7729 - Cattle, Brucellosis - 6072 - Cattle, Classical Swine Fever - 90 - Pigs	Gross written premium £: (Foot-and-mouth - 2000 - £465,489 - 2001 - £455,817 - 2002 - £954,610 - 2003 - £1,217,258 - 2004 - £1,312,558); (Tuberculosis - 2000 - £960,518, - 2001 - £1,318,892, - 2002 - £1,707,754, - 2003 - £2,282,234, - 2004 - £2,778,999); (Brucellosis - 2000 - £345,686, - 2001 - £340,556, - 2002 - £337,090, - 2003 - £319,380, - 2004 - £325,421); (Classical Swine Fever - 2000 - £46,083, - 2001 - £50,705, - 2002 - £46,282, - 2003 - £37,221, - 2004 - £32,878)	
GR	No						
IT	Yes	aphte, tuberculose, brucellose, leucose.	nous ne disposons pas de donnees statistiques a ce sujet.	nous ne disposons pas d'informations precises en ce qui concerne le marche.	nous ne disposons pas de donnees statistiques a ce sujet.	nous ne disposons pas de donnees statistiques a ce sujet.	nous ne disposons pas de donnees statistiques a ce sujet.
IT	Yes	1) afta, brucellosi, leucosi, tubercolosi, BVD, MD; 2) not defined	non siamo a conoscenza	non siamo a conoscenza	non siamo a conoscenza	non siamo a conoscenza	non siamo a conoscenza
NL	No						
NL	No						
NO	Yes	Epidemic diseases aren't defined, all diseases are included	Gjensidige have 75% agricultural market share. Of the cattle insured in our company, 80% have disease cover, 65% of the pigs have, and 85% of the poultry and less than 10% of the	3 companies, as far as we are concerned. Covers and livestock productions are insured much like the ones in Gjensidige.	Very approximate: Livestock in 16.000 cattle-farms, 2.300 pig-farms, 1200 poultry-farms. Less than 1.000 sheep- farms.	Hard to specify this, we don't split covers into specific diseases, and we don't have the economic results for the other companies in such details.	Salmonella, aviaer rhino trakeitt, scrapie, mycoplasma (classified as epidemic disease in Norway - not in the rest of Europe?) were the most common epidemic diseases in the claims.

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			sheep				
PT	No						
SE	Yes	The statutory definition is used		2			Paratuberculosis New Castle?

Table 15: Insurance products currently available for epidemic livestock disease

	Government support for private insurance and details	Period of validity of the cover	Exclusions generally included in contracts	Maximum compensation limit	Obligations of the policy holder concerning specific preventive measures	Other obligations of the policy holder concerning specific preventive measures	Authority responsible for adherence to obligations and penalties	Definition of trigger of coverage	Legislation requiring farmers to take such a cover	Holder of the insurance policy
AT	Not applicable									
BE	Not applicable									
CH	Not applicable									
CH	None	3 years with tacit renewal	Genetic failure, costs for vets/medicine, transports, salvage expenses, slaughter, impotence or sterility	Yes, The maximum is 6'000 Euros per animal.	None	Yes, losses have to be notified within 24 hours.	In case of delays in notifying disease cases the insurer can refuse the indemnification totally or partly	Death or emergency slaughter	No	Individual farmers
DE	None	1 Jahr bis 5 Jahre	Lt. individueller Vertragsbedingungen, z.B. - Vorvertragliche Mängel (z.B. Folgen von Mängeln oder Krankheiten, die bei Beginn der Versicherung bereits vorhanden waren) - Schäden durch Krieg, innere Unruhen, Erdbeben, Kernenergie, Brand, Blitzschlag, Explosion, Überschwemmung, Sturm	Yes, Lt. individueller Vertragsbedingungen, z.B. Deckungsgrenze ist die Versicherungssumme. Die Haftzeit ist begrenzt auf (bis zu) 12 Monate	Yes, Lt. individueller Vertragsbedingungen, z.B. Einhaltung aller gesetzlichen Bestimmungen (Beispiel: Hygiene-Vorschriften)	Yes, Lt. individueller Vertragsbedingungen, z.B. - Sicherheitsvorschriften - Meldung von Veränderungen	- Veterinärbehörden gemäß den gesetzlichen Bestimmungen. - ansonsten Überprüfungen nur im Schadenfall durch Versicherer, Tierseuchenkasse und Amtstierarzt. Der Verstoß gegen gesetzliche Bestimmungen hat eine Verletzung der vertraglichen Obliegenheiten zur Folge. - ggf. Qualitätssicherungs-Systeme.	Bestehender Versicherungsschutz / entschädigungspflichtiger Schaden / Entschädigung nach Überschreiten des Selbstbehalts / Behördliche Anordnungen	No	Individuell der Tierhalter
DK	Not applicable									
ES	Not applicable									

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	applicable									
ES	None Premiums for agroseguro are subsidised, there is public reinsurance	As a general rule, yearly and extendable.	As a general rule, all those that are not covered.	Yes, Sums Insured are calculated as described and these are the limits. Standard values are as follows: - Milk: 0.2 EUR/kg * 2000 kg of milk (equivalent to the aforementioned 4 months) - Fattener cattle: 200 EUR as per animal (meat) and 300 EUR as per animal (milk) - Breeding livestock: 120 EUR/calf (milk) and 225 EUR/calf (meat) Should the livestock owner justify a higher value/production as per animal, a higher Sum Insured (and equal limit) can be agreed.	Yes, Before the livestock owner becomes an insured:- Compliance with Official Sanitary Controls with negative results for all animals within the farm during the last two years.- No epidemic disease outburst during the previous three months in any farm surrounding the policy holder 3 km radius.	Yes, - The policy holder must own the animals to be insured. - The animals must be in perfect health. - The policyholder must create conditions to prevent the occurrence and spreading of infections according to general legal statutes. - The policyholder must perform his/her duties in compliance with general legal statutes. . The animals must be located where indicated in the Particular Conditions of the Policy while it is in force. - The animals will be used in the indicated way in the Particular Conditions of the Policy. The policyholder must take all necessary measures to maintain the farmstead at its best hygienic and sanitary conditions. - The policyholder must observe veterinary measures about animal medical treatment. - Follow vaccination campaigns. - Notify the insurer the suspicion on the disease in livestock.	- The underwriters must ratify the aforementioned items. When a loss takes place, the Technical Department at Head Office becomes responsible for the follow-up. - Insurance company is always rapidly notified about the outbursts.	Disease outburst: one only notified case is enough.	No	Both individual farmers and farmers' associations
FI	None	One year		Yes	Yes, Compliance with precautionary guidelines which constitute part of the policy conditions is required. The guidelines apply to acquisition of production livestock and feeds, maintenance and cleaning of production buildings and sanitation facilities, etc.	Yes, Obligation to contact a veterinarian immediately after an outbreak of disease and comply with his/her instructions, obligation to take samples.	Compensation may be reduced if precautionary guidelines have not been complied with.		No	Eg slaughterhou ses, dairies and egg packers have taken out group insurance policies. Individual policies have also

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										been taken out.
FR	Not applicable									
UK	None	Annual renewable policy	The Insured must comply with all legal requirements relating to the disease, such as isolation and testing. We will not pay for any animals slaughtered under Animal Welfare Schemes (where the slaughter is not required to prevent the spread of disease (foot and mouth disease)).	Yes, there are no set ceilings, but the limit per period of insurance is always the sum insured eg for foot and mouth disease, total value of livestock is £100,000, insured percentage is 25%, sum insured is £25,000 (25% of 100,000, limit per period of insurance is £25,000.	None	Yes, The Insured must comply with all the legal requirements relating to the disease, for example reporting signs of disease, isolation of animals, cleansing and disinfections	If it is discovered there has been a breach of the above requirement, the insurance would cease.	Animals must be slaughtered by the government to prevent the spread of the disease concerned	No	Individual farmer
GR	Not applicable									
IT	Yes (De 2004, Par Le Decret Legislatif N. 102 Du 29/3/2004 Et Par Le Plan D'assurance Agricole Annuel Correspondant, Ainsi Que Par Des Lois Specifiques Regionales Et Provinciales)	duree generalement annuelle.	dol, faute grave de l'assure, vol, actions dolosives de tiers, transport, tremblement de terre et maladies preexistantes.	yes, limites dans la percentuelle de la somme assuree pour chaque evenement et limites dans les valeurs absolues par rapport au numero des tetes de betails et des valeurs assurables en puissance.	none	none	police veterinaire, veterinaires de confiance des societes d'assurance.oui, selon ce qui est etabli par les regles contractuelles.	souscription du contrat et payement contemporain de la prime.	No	CHAQUE ELEVEUR.
IT	Yes (dal 2004; D.Leg.vo n. 102 del 29/3/2004 e relativo piano	annuale	dolo e colpa grave dell'Assicurato, perdita, furto, rapina, atti dolosi di terzi, trasporto, terremoto, nucleare, malattie preesistenti	None	None	None	1) veterinari di fiducia, 2) si	pagamento premio	No	singole aziende

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	assicurativo agricolo annuale nonche particolari leggi regionali e provinciali)									
NL	Not applicable									
NL	Not applicable									
NO	None	1 year	Insurance doesn't cover what the Statutory schemes cover. Insurance doesn't cover diseases present while the insurance cover was bought.	Yes, Per year, all insured livestock in our company; 6.25 mill EURO	Yes, Due to the branch and official requirements. Some prevention measures aren't obliged; these give discount on the insurance premium.	None	The government veterinaries are following up that the state regulations iro husbandry comply with the rules. We do not know about any penalty-cases in situations mentioned above.	Accident or disease must be present and cause direct loss or/and loss of production (interruption).	No	Individual farmers
PT	Not applicable									
SE	None	One year	Diseases suffered before taking on insurance. Diseases suffered before end of the qualifying period. Special limitations or reservations Costs for own personnel. Force measures	None	Yes, No, The farmer is obliged to have insurance for swine and bird production, not for bovine cattle.	None	According to control programmes, observance is checked yearly by affiliated private or state veterinaries. Failure leads to exclusion from the control programme.	Certificate issued by a veterinary.	No	Individual farmers

Table 16: Prospects for epidemic livestock disease insurance

	Is this insurance considered to be a growth segment	Reasons	Main barriers to the development of appropriate insurance products	Measures at the European level that could encourage the development of this market segment	Measures at the national level that could encourage the development of this market segment
AT	No	High risk concentration, regulated by the law of epizootic diseases, difficult to get reinsurance	Low requirement on market, because regulated by law, no balancing of risks, depending on low market penetration	Harmonised schemes with private public partnership	Private public partnership (agriculture - insurance - government department)
BE	Yes	See right	- Lack of data (reliable risk assessment) - Perception that it would never be profitable - Insufficient interest from the farmers	No competition with government support - Initiatives who make premiums acceptable for farmers - Initiatives who make insurance products profitable for insurance companies - Guarantees for a fair completion	See left
CH	No	Existing state-aided solution	Statutory compensation scheme		New legal basis without statutory compensation scheme
CH	No	Very small market, the number of farmers decreases consistently in Switzerland, the value of livestock decreases as well, there is only one insurer in Switzerland that offers such kind of cover	See left column. Also, no prospect of profit	Compulsory insurance	Compulsory insurance
DE	Yes	- Zunehmende Betriebsgrößen: betriebliches Wachstum führt zu steigendem Fremdkapitaleinsatz. Hierbei dient die Ertragsschadenversicherung dem Kreditgeber als Sicherungsinstrument - Steigendes Risikobewusstsein der Tierhalter mit zunehmender Spezialisierung - zunehmendes Risiko durch offene Grenzen innerhalb der EU und Globalisierung	Geringe verfügbare finanzielle Mittel der Tierhalter zum Bezahlen des Deckungsschutzes.	Europäisches Absicherungssystem in Verbindung zu nationalen Absicherungssystemen	Für ein flächendeckendes Versicherungsangebot unverzichtbar: 1. Beteiligung des Staates an einer nationalen Rückversicherungslösung (Layer-Modell oder Bildung eines vom Staat gespeisten und verbrieften Kapitalstocks, aus dem zu günstigen Preisen Rückversicherungskapazitäten bereit gestellt werden) 2. staatliche Prämienbezuschussung für Landwirte
ES	Yes	Because epidemic livestock diseases are becoming more common and more important each day, so the farmer needs tools for manage this problem, and one of the most interesting tools is the insurance for livestock epidemic diseases	The main barrier is that there isn't a common sanitary control pack of measures for all owners and countries	Historical and detailed data statistical series Funds to compensate the compulsory slaughtering to eradicate epidemics, complementary to insurance. Promotion campaigns of insurance as a tool to compensate and manage losses dues to epidemics.	Common sanitary control measures. Subsidized Insurance premiums. Adequate reinsurance for these products
ES	Yes	To comply with livestock owners concerns.	Lack of common and homogeneous sanitary control guarantees at all levels: owners,	Sound long term and detailed statistics. - As a first step and complement to insurance, the	- Diseases sanitary control. - Design of common products to be sold by the

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			country and international.	promotion of funds to compensate the compulsory slaughter following eradicate diseases and epidemics. The private insurance will cover this "Difference In Conditions" and could enhance covers to accomplish the livestock owner needs. - Communication and information for prone insured. Promotion of insurance as a prevention measure.	market. - Subsidized premiums.
FI	No				
FR	No	L'impact des épizooties dépend d'actions collectives en matière de veille sanitaire et de prophylaxie dans les élevages. Ces mesures sont définies par les Pouvoirs Publics, par arrêtés ministériels sur la base de la réglementation définie au code rural. L'efficacité étant fortement dépendante de la rapidité et des moyens mis en œuvre, n'importe quel dysfonctionnement, même insignifiant, retire au risque son caractère aléatoire. Pour mémoire, les mesures de police sanitaire que les Pouvoirs Publics doivent engager afin d'éviter la propagation des épizooties sont définies au Titre deuxième du Livre II du code rural (lutte contre les maladies des animaux - articles L. 221-1 à L. 228-7).			
UK	No	The demand for the insurance of epidemic livestock diseases generally does not exist in this country. The demand only arises when the disease has come in to the country and then perhaps it would not be available. Farmers in general do not view it as an important (or an affordable) part of their farm insurances.	The lack of a desire for this type of insurance and capacity in the market.	It would have to be made compulsory	It would have to be made compulsory
GR	Yes, No	On the condition that the extent of state intervention will allow market development and there will be available satisfactory reinsurance. Farmers ask today for such insurance products because they believe that the state compensation is not always satisfactory	State ad hoc compensation, lack of satisfactory reinsurance, high premium rates unbearable by farmers	European Reinsurance scheme, premium subsidies	Premium subsidy, less state intervention, state reinsurance cover
IT	Yes	la contribution de l'état sur le coût d'assurance peut représenter pour le secteur zootechnique pas seulement un efficace support mais aussi une opportunité pour le risk-management d'entreprise.	peu de clarté législative, des conditions d'assurance complexes, des coûts des couvertures élevés.	contribution plus importante sur les frais des primes.	contribution plus importante sur les frais des primes.
IT	No	Settore produttivo in contrazione	costi e complessa condizioni assicurative	contributi pubblici sostanziosi sul premio di assicurazione	See column left
NL	No	It will never be a profitable product	The government is responsible for the (health) safety of the population. That is why they always want to have influence in how to suppress an outbreak. On the other hand, farmers underestimate the risk of epidemic	Influence in the measures that have to be taken when an epidemic disease occurs. Give cover when the loss will exceed a certain amount. Make preventive actions possible e.g.	See column left

Evaluation of the CAHP: Analysis of Insurers' Survey
DG SANCO Evaluation Framework Contract Lot 3 (Food Chain)

			diseases and are not really willing to pay premium. The conviction is that the government will always give financial support.	marker vaccines.	
NL	No	It will never be a profitable product	The government is responsible for the safety of people. That is why they will always must have influence in how to suppress an outbreak. This is also why they always will take participation the costs. On the other side, farmers underestimate the risk of epidemical disease and are not really willing to pay premium. The state of mind is that the government will always give financial support.	Influence in the measures that have to be taken when an epidemic disease occurs. Give cover when the loss will exceed a certain amount. Make preventive actions possible e.g. marker viruses.	See column left
NO	Yes	Increased risk for infectious diseases due to larger livestock production units and life animal transport/sales.	Difficult to define and estimate the risks accurate: epidemic diseases are related to biology - biology is never black or white	Reduction of transport and sales of life animals would make the risk more predictable, the risk for epidemics would be reduced. Reduction in the use of antibiotics to livestock which produce meat	See column left. Also increased Consumer demands to animal health and reduction in the use of antibiotics to livestock which produce food articles..
PT	Yes	The insurers' know-how and expertise in the field of risk management and claims settlement may contribute to create and develop more efficient models of transferring financial aid from the European or National authorities to the livestock owners, within the scope of the plans for the control and eradication of animal diseases.	The high cost of the insurance premium and the lack of the adequate reinsurance protection.	To subsidize the cost of insurance taken out by livestock owners and to create an adequate protection system (reinsurance).	See column left
SE	Yes	The number of infectious diseases is increasing as a consequence of more cross-border mobility. This leads to increasing need for insurance.	High risk and difficulties of finding re-insurance at a reasonable cost. Health control programmes reduces the risk and thus lowers the barriers to develop new insurance products.	Common epizootic legislation and increased control of livestock trade. Restrictions on mobility of livestock, quarantine regulation and prevention of smuggling.	Increased control of livestock trade. Restrictions on mobility of livestock, quarantine regulation and prevention of smuggling. Campaigns to increase knowledge of infection. Control of imported livestock. Improved health control programmes.

Annex 2: Survey questionnaire of insurers' survey



EPIDEMIC LIVESTOCK DISEASES
*
JOINT CEA, AISAM, ACME, FCEC SURVEY ON
INSURANCE COVERS FOR EPIDEMIC LIVESTOCK DISEASES

**Please return questionnaire by email to the organisation that has forwarded it to you no later than
15/12/2005**

IDENTIFICATION DATA

Name and country of organisation:

Please specify

Questionnaire completed by (Name of person, position, contact details):

Please specify

INTRODUCTION

In the framework of the ongoing evaluation of the Community Animal Health Policy (CAHP) the Food Chain Evaluation Consortium (FCEC) has been commissioned by the European Commission to conduct a pre-feasibility study on cost-sharing schemes for epidemic livestock diseases. The aim of the Commission is to increase the level of responsibility of agricultural producers regarding the prevention, the detection and control of major epidemic animal diseases. In 2005, a Communication from the Commission to the Council on risk and crisis management in agriculture was published¹, in which the Commission suggested that the potential of different options should be assessed to completely or partially replace current ad hoc emergency measures, including the support of private insurance schemes. Civic Consulting of the FCEC will, in close cooperation with European associations of insurers, analyse the extent to which such schemes can be introduced in a harmonised way at the EU level taking into account the experience with such schemes in some Member States.

The information you will provide through this joint questionnaire of CEA, AISAM, ACME and FCEC will be crucial to assess the feasibility of different options. We therefore greatly appreciate your contribution.

For more information on the evaluation please visit the evaluation website (http://europa.eu.int/comm/food/animal/diseases/strategy/cahpeval_en.htm). Do not hesitate to contact the persons listed below should you have any further questions:

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¹ SEC(2005)320

I) COUNTRY BACKGROUND: PUBLIC AND OTHER COMPENSATION SCHEMES FOR EPIDEMIC LIVESTOCK DISEASES

1. Is there a statutory compensation scheme for losses of farmers due to epidemic livestock diseases co-financed by livestock holders in your country (i.e. a public scheme without involvement of private insurers)?

Yes No Don't know

- **If yes,**

a) What are the name and the legal basis of the statutory compensation scheme?

Please specify

b) What type of scheme is it (sector-wide fund etc.)? How is it financed?

Please specify

c) What epidemic livestock diseases are covered by the statutory compensation scheme?

Please specify

d) What costs are covered by the statutory compensation scheme?

i. Direct losses: (e.g. value of livestock, culling and rendering costs).

Please specify

ii. Consequential losses: (e.g. reduction of animal value, interruption of production, movement and marketing restrictions, costs for vets/medicines, safety measures).

Please specify

iii. Prevention of epidemics?

Please specify

e) Who is covered by the statutory compensation scheme (livestock owners, third party, others)?

Please specify

f) Who administers the statutory compensation scheme (please provide name of institution/s and contact details)?

Please specify

2. Was there ad-hoc compensation paid by the government to farmers (not related to a statutory compensation scheme) in case of epidemic livestock diseases in the period 2000-2004?

Yes No Don't know

- If yes,

Please specify

3. Are there non-statutory compensation schemes for losses of farmers to epidemic livestock diseases in your country (i.e. private schemes of farmers' associations etc.) without involvement of private insurers?

Yes No Don't know

- If yes,

a) What are the name and the legal basis of the non-statutory compensation scheme?

Please specify

b) What type of scheme is it (mutual pool etc.)? How is it financed?

Please specify

c) What epidemic livestock diseases are covered by the non-statutory compensation scheme?

Please specify

d) What costs are covered by the non-statutory compensation scheme?

i. Direct losses: (e.g. value of livestock, culling and rendering costs).

Please specify

- ii. Consequential losses: (e.g. reduction of animal value, interruption of production, movement and marketing restrictions, costs for vets/medicines, safety measures).

Please specify

- iii. Prevention of epidemics?

Please specify

- e) Who is covered by the non-statutory compensation scheme (livestock owners, third party, others)?

Please specify

- f) Who administers the non-statutory compensation scheme (please provide name of institution/s and contact details)?

Please specify

II) MARKET SITUATION FOR LIVESTOCK INSURANCE

4. Is insurance cover for livestock related risks available on the market in your country?

Yes No If no, please continue with section IV

- **If yes,**

a) What are the risks covered by the insurance?

Please specify

b) For which animal diseases is insurance cover available? Please specify by type of livestock.

Please specify

c) Are epidemic livestock diseases defined in the insurance as a non-covered risk?

Please specify

5. Is insurance cover for epidemic livestock diseases available on the market in your country?²

Yes No If no, please continue with section IV

- **If yes,**

a) What is the definition of epidemic livestock diseases used in the insurance? Is it a statutory definition?

Please specify

b) What is the approximate market share of epidemic livestock disease insurance (insured/total)? Please differentiate by type of livestock and disease.

Please specify

c) What is the approximate number of insurers providing this cover presently? Please differentiate by type of livestock and disease.

Please specify

² Please fill in this section even if the insurance cover is part of a more general cover for livestock related risks listed under question 4.

- d) What is the approximate number of farmers and number and type of livestock insured presently?
Please differentiate by type of livestock and disease.

Please specify

- e) Could you indicate the total premium income received for epidemic livestock disease cover in each of the years 2000-2004 (in Euro)? Please differentiate by type of livestock and disease.

Please specify

- f) What were the most significant claims against epidemic livestock disease cover in the period 2000-2004 (in Euro)? Please differentiate by type of livestock and disease.

Please specify

6. Is there demand for epidemic livestock disease insurance that is not satisfied at present?

Yes No

- **If yes**, for which type of livestock and undertakings? Please provide reasons why demand is not satisfied.

Please specify

7. What reinsurance is used for the existing insurance covers and who is the reinsurer?

Please specify

8. Does the government provide support to private epidemic livestock disease insurance?

Yes No

- **If yes**,

- a) Since when? What is the name of the support scheme?

Please specify

- b) What is the national legal basis? Administering institution?

Please specify

c) For which type of livestock and type of disease?

Please specify

d) Is the government support dependent on specific conditions (e.g. prevention measures, on-farm health management etc.)?

Please specify

e) What type of support is provided (e.g. government subsidy of insurance premiums, governmental reinsurance etc.)?

Please specify

f) In case there is a governmental reinsurance for epidemic livestock disease insurance – what are the provisions of the reinsurance cover?

Please specify

III) INSURANCE PRODUCTS CURRENTLY AVAILABLE

9. Type of cover - Is cover for epidemic livestock diseases ...

a) Systematically offered with non-specialised cover (e.g. general livestock insurance)?

Yes No

b) At an additional premium?

Yes No

c) Or is it supplementary cover?

Yes No

d) In this case, is it:

Optional Compulsory

10. Are separate covers available for epidemic livestock diseases (i.e. stand alone insurance products)?

Yes No

Please specify

11. For which epidemic livestock diseases is insurance cover available? Please specify by type of livestock.

Please specify

12. Which epidemic livestock diseases/types of livestock are considered to be uninsurable?

Please specify

13. Who is the holder of the insurance policy (individual farmers, a farmers' association etc.)?

Please specify

14. What is, generally, the period of validity of cover?

Please specify

15. What exclusions are generally included in contracts?

Please specify

16. Subject of the cover

- a) What direct losses are included in the cover (e.g. value of livestock, culling and rendering costs)?

Please specify

- b) What is the basis for the indemnification of direct losses (value of livestock, number of affected livestock)?

Please specify

- c) What consequential losses are included in the cover (e.g. reduction of animal value, interruption of production, movement and marketing restrictions, costs for vets/medicines, safety measures)?

Please specify

- d) What is the basis for the indemnification of consequential losses (e.g. a percentage of insured sum, duration of business interruption or actual losses)?

Please specify

- e) What losses cannot be indemnified?

Please specify

17. Do the insurance products available have a maximum compensation limit (ceiling of coverage)? Per year or per single claim?

Yes No

- **If yes**, what are the amounts used as ceiling of coverage (in euros)?

Please specify

18. Do the insurance products available foresee a deductible?

Yes No

- **If yes**, is the deductible a percentage of the total loss, a fixed amount or a combination of the two? What are the amounts and/or percentages used? Does the deductible depend on existing prevention measures or other conditions?

Please specify

19. What are the obligations of the policy holder:

- a) Specific prevention measures? (e.g. On-farm health plans etc.)

Yes No

Please specify

- b) Other obligations?

Yes No

Please specify

20. How frequent and by whom is controlled that the policy holder adheres to the obligations specified? Are delays in notifying disease cases and other negligent behaviour penalised?

Please specify

21. What is the definition of the trigger of coverage (i.e. what are the criteria that must be fulfilled in order for the insurance to apply)?

Please specify

22. Is there, on your market, legislation requiring farmers in certain sectors to take out such cover?

Yes No

- **If yes,**

Please specify

IV) PROSPECTS FOR EPIDEMIC LIVESTOCK DISEASE INSURANCE

23. Do you consider epidemic livestock disease insurance to be a growth segment in terms of future development for insurance companies?

Yes No

- In either case,

a) What are the reasons?

Please specify

b) What are the main barriers to the development of appropriate insurance products?

Please specify

24. What measures at the European level could encourage the development of this market segment?

Please specify

25. What measures at the national level could encourage the development of this market segment?

Please specify

26. An insurance product covering epidemic livestock diseases should be ...

a) ... part of an existing insurance cover for livestock (i.e. by extending livestock insurance covers) or a stand alone product?

Please specify

b) ... targeted to which groups (individual farmers, farmers' association etc.)?

Please specify

Annex 3: Working paper on options for harmonised cost-sharing schemes presented at the workshop on 17 March 2006

Working Paper for the Expert Workshop on Options for Harmonised Cost-sharing Schemes for Epidemic Livestock Diseases

17 March 2006, Brussels, Congress Centre 'Albert Borschette'

1. Introduction

In the framework of the ongoing evaluation of the Community Animal Health Policy (CAHP) the Food Chain Evaluation Consortium (FCEC)¹ has been commissioned by the European Commission to conduct a pre-feasibility study on cost-sharing schemes for epidemic livestock diseases. The aim of the Commission is to further increase the level of responsibility of stakeholders regarding the prevention, the detection and control of major epidemic animal diseases. In 2005, a Communication from the Commission to the Council on risk and crisis management in agriculture was published², in which the Commission suggested that the potential of different options should be assessed to completely or partially replace current ad-hoc emergency measures, including with the support of private insurance schemes. Civic Consulting of the FCEC analyses the extent to which cost-sharing schemes can be introduced in a harmonised way in the EU taking into account the experience with such schemes in selected Member States. The workshop brings together experts from insurers, stakeholder organisations, costs-sharing schemes, the Commission, the European Parliament and the evaluation team. The following document summarises initial thoughts of the evaluation team³ on criteria for and conclusions on harmonised cost-sharing schemes for epidemic livestock diseases and formulates questions for discussion. The evaluation team welcomes written statements of stakeholder organisations *after* the workshop, to be sent to office@civic-consulting.de preferably no later than 31 March 2006.

2. Criteria for harmonised cost-sharing schemes

Cost-sharing schemes to be considered in the framework of the pre-feasibility study on cost-sharing schemes for epidemic livestock diseases should fulfil the following criteria that have been determined on basis of relevant policy documents and preliminary discussions with the Commission and Member States representatives:

- I. *Categorisation of animal diseases.* Cost-sharing schemes have to take into account that the public interest in managing risks associated with a particular disease depends on the possible public health, animal health and/or economic impacts of the disease.
- II. *Incentive compatibility.* Incentives provided by cost-sharing schemes, in particular by their monetary flows, have to encourage efficient risk-reducing behaviour of all parties involved, in particular through preventive measures. "Above all, ... incentives for preventive measures to reduce risks and avert crises, and to minimise their effects, must be provided."⁴

¹ The FCEC consists of Civic Consulting, Bureau van Dijk, Arcadia International and Agra CEAS

² COM(2005) 74 final of 09.03.2005, Communication on risk and crisis management in agriculture

³ This analysis has been developed jointly by Civic Consulting and the Institute for Risk and Insurance of the University of Hamburg, Germany

⁴ European Parliament, Report on risk and crisis management in the agricultural sector, Committee on Agriculture and Rural Development, FINAL A6-0014/2006, 30.1.2006

- III. *Balancing costs and responsibilities.* The financing of cost-sharing schemes has to reflect the responsibilities of the parties involved. The costs of disease control, eradication and prevention should be shared. Government intervention is needed to facilitate this.
- IV. *Prevention of distortion of competition.* State intervention should not lead to a distortion of competition between Member States.
- V. *Compatibility with EU financial instruments and ongoing initiatives.* Cost-sharing schemes should operate within a framework for state-support that takes into account EU financial instruments (including use of funds from modulation, if appropriate), cross-compliance requirements and WTO requirements. Cost-sharing schemes have to be seen in the ongoing discussion on risk and crisis management in the agricultural sector⁵ and the ongoing CAHP evaluation.
- VI. *Harmonisation and flexibility of implementation.* Cost-sharing schemes should be harmonised to the extent necessary to fulfil the above criteria, while taking into account existing systems. “In developing EU-wide systems for cost sharing, there is a need for a common framework which allows flexibility of implementation by Member States.”⁶

3. Main alternatives for cost-sharing schemes

An initial analysis of the evaluation team indicates that four main alternatives are available to finance prevention, the detection and control of outbreaks of major epidemic animal diseases at the Community / Member State level in the future. However, only one of them is compatible with the above criteria:

- A. **Continuation of the current system of expenditure in the veterinary field.** There are significant doubts that a continuation of the current framework defined by Council Decision 90/424/EEC would correspond to the criteria defined above. For example, the current financing of control measures in case of a disease outbreak focuses on compensation of direct losses (mainly related to the slaughter of animals and their destruction). This provides adverse incentives under certain circumstances (and therefore could be not fully in line with criteria II), as has been analysed in detail in section 4.2 of this working paper. Also, the current level of financial responsibility of the parties involved (criteria III) is very different in Member States. In some Member States the compensation of direct losses is fully paid by the government (in combination with EU-Cofinancing), no cost-sharing scheme exists. In other Member States stakeholders have to finance compulsory cost-sharing schemes that cover a part or even the whole national contribution (up to a certain limit). This lack of harmonisation might lead to a distortion of competition between Member States (criteria IV).
- B. **Financing costs of disease control through ad-hoc measures in case of a disease outbreak.** Ad-hoc compensation rules are usually developed after a disease-outbreak, either on national or Community level or both. This involves, however, uncertainty for farmers regarding how much compensation is being paid to them, if at all. No incentives are provided to encourage efficient risk-reducing behaviour of all parties involved (criteria II), in the contrary it could motivate risk-increasing behaviour in certain cases because compensation in case of a disease outbreak is taken for granted. The probability of an ad-hoc program to be set up increases with overall economic losses of an epidemic disease. This also could imply adverse incentives to inflate aggregate losses.

⁵ COM(2005) 74 final of 09.03.2005; European Parliament, FINAL A6-0014/2006 of 30.1.2006

⁶ Informal Meeting of CVOs, Edinburgh, 7 September 2005

- C. **Setting up a unified cost-sharing scheme at the European level.** A possibility for providing compensation in the case of a disease outbreak that fulfils most of the above listed criteria could be to set up a European cost-sharing scheme, following as possible example an existing national model such as a public Animal Health Fund, to which every farmer would have to contribute (directly or through national affiliates). However, the risks (diseases) a cost-sharing system is supposed to cover may differ nationally and even regionally. This should be reflected in the set-up of cost-sharing schemes. Also, a unified cost-sharing scheme at the European level would per definition not allow flexibility of implementation by the Member States and would also not take into account existing systems (criteria VI). Thus setting up an EU-wide cost-sharing organisation could be inappropriate.
- D. **Defining a harmonised Community framework for national or regional cost-sharing schemes.** The initial analysis of the evaluation team indicates that this is the preferred alternative that can be brought in line with the above criteria. The main element of this alternative is to resort to existing national schemes, and to require other Member States to set up similar systems. National cost-sharing schemes could have a different institutional set-up but would have to function according to common rules. This would allow for flexibility of implementation by the Member States and at the same time likely increase acceptance of stakeholders, as participation mechanisms are easier to implement at the national or regional level. Harmonised at the EU level should be:
- The obligation of Member States to introduce a cost-sharing scheme at the national or regional level;
 - The objective of the different schemes, i.e. providing efficient transfer of animal health risk from farmers to a cost-sharing scheme;
 - And the basic principles for efficient schemes, involving organisational principles like the responsibility for certain diseases only, and operating principles like conditions for incentive compatibility and covered risks.

Common rules would also imply significant changes of the existing cost-sharing schemes, because the conditions for incentive compatibility and efficient risk transfer that are detailed in section 4.2 below are currently not met.

The following sections of this working paper describe the common rules that, according to the initial analysis of the evaluation team, would form the basis for implementing alternative D.

4. A harmonised Community framework for national or regional cost-sharing schemes

4.1. Categorisation of animal diseases (Criteria I)

In line with criteria I cost-sharing schemes have to take into account that the public interest in managing risks associated with a particular disease depends on the possible public health, animal health and/or economic impacts of the disease. Based on an initial analysis of the evaluation team the following rules for harmonised cost-sharing schemes could be proposed:

1. ***An efficient cost-sharing scheme may require animal health standards that are different from legal requirements.*** Epidemic livestock diseases may involve large externalities, i.e. costs resulting for third parties. An animal health standard is efficient if it does not only account for the losses of the individual farmer but takes into account losses that may result for third parties such as farmers in the neighbourhood. When an efficient standard is implemented, the total costs of disease

over time are minimised⁷. When efficient standards are lower than legal standards, this has no effect on prevailing animal health standards, because legal standards have to be met. When efficient standards are higher than legal standards, however, a cost-sharing scheme should require the implementation of these standards as a pre-requisite. For example, it might be efficient to have regular health checks of farm animals for all farmers (not required by law) instead of indemnifying the costs of large-scale disease outbreaks that could possibly have been prevented by such checks. Of course legal standards are in place, but these standards are not necessarily efficient, as efficient animal health standards could differ by region, e.g. depending on livestock density in different parts of the country (e.g. with respect to “intensity hot spots”).

2. ***Certain animal diseases require significant public involvement in a cost-sharing scheme and participation of farmers in a scheme needs to be compulsory.*** Some diseases are a large potential hazard to the economy and / or to the health of the population and are therefore normally covered by legislation. The diseases involving large externalities are mainly extremely contagious diseases like FMD or Avian Influenza, which are referred to hereafter as Diseases with High Externalities (DHE). Some of them are also zoonotic diseases posing a significant health threat to the population. Efficient animal health standards to manage the risk of these diseases are relatively high and an efficient cost-sharing scheme has to consider an effective mechanism that ensures implementation of these standards. Extremely contagious diseases are very difficult to be covered on unregulated private insurance markets because of their loss accumulation potential. There is a public interest to cover this type of diseases in a cost-sharing scheme. A cost-sharing scheme for diseases with high externalities (DHE-scheme) should be compulsory. The mechanism to implement efficient animal health standards has to be compulsory for every farmer, because the public interest to meet these standards does not automatically align with a farmer’s interest. An individual farmer could possibly prefer lower standards, because external losses do not accrue to him.
3. ***Some diseases require only limited public involvement.*** These diseases will hereafter be referred to as Diseases with Low Externalities (DLE). They are mostly only moderately infectious. A significant spread of DLE to other farms usually is not to be expected, and a large-scale epidemic is unlikely (e.g. Brucellosis, Bovine Tuberculosis). The main reason for public concern is that under specific conditions they may pose some hazard to the economy and / or to the health of the population and therefore are mostly covered by legislation. Also, if a DLE is notifiable according to Community or OIE rules, an outbreak may lead to additional externalities through potentially affecting trade in animals and products of animal origin.
This leads to the following options for discussion:
 - a) *Also in case of Diseases with Low Externalities (DLE) participation in a cost-sharing scheme could be compulsory, as is the case for DHE.*
 - b) *Participation in a cost-sharing scheme for DLE could be voluntary.*
 - c) *DLE diseases could be left to private insurance markets (similar to DNE, see below).*
4. ***Other diseases do not require public involvement and related risks should be left to private insurance markets.*** These diseases will hereafter be referred to as Diseases with No Externalities (DNE). Similar to DLE a spread to other farms usually is not to be expected, and a large-scale epidemic is almost impossible. They are mostly not covered by relevant legislation. Cost-sharing solutions for DNE can be left to private insurance markets, since there is no public interest to re-

⁷ Efficient animal health standards take into account both losses caused by epidemic livestock diseases and the costs for the increased health standards. They lead to a minimum of the sum of expected losses plus the costs associated with meeting these standards for the whole society.

strict freedom of farmers' production management decisions. Any public involvement in compensation for losses due to a DNE should be withdrawn. Instead, governments should support the development of private insurance markets to cover these risks.

5. ***Disease categorisation could take into account regional differences.*** Whether a disease poses a potentially large hazard to an economy and / or population (i.e. whether it is a DHE) may depend on the infectiousness and other characteristics of the disease, but also on regional factors like climatic and other environmental conditions, prevailing farming practices, farming density, and others. Disease categorisation could therefore differ by region. On the other hand, having different categories of diseases may also affect the free circulation of goods and animals.

This leads to the following options for discussion:

- a) *Disease categorisation should be done at the Community level.*
- b) *Disease categorisation should be done by each cost-sharing scheme according to harmonised criteria.*
- c) *Disease categorisation should be done by each cost-sharing scheme according to criteria defined by each scheme.*

4.2. Incentive compatibility (criteria II)

Based on an initial analysis of the evaluation team the following rules for harmonised cost-sharing schemes could be proposed to reach incentive compatibility (criteria II) and efficient risk transfer of a cost-sharing scheme. Please note that the term "cost-sharing organisation" refers to the body managing the cost-sharing scheme, independent from the institutional set-up (see section 4.4):

6. ***Contributions of farmers to a cost-sharing scheme have to reflect their individual risks.*** Whenever a cost-sharing organisation observes risk-relevant production circumstances or decisions (e.g. location, degree of vertical integration of the production chain, the intensity of livestock contacts with other farms, etc.) the contributions to a cost-sharing scheme have to be differentiated according to the effect of these risk-relevant factors on expected losses. At minimum, the contributions to a cost-sharing scheme should reflect regional differences in risk, caused by e.g. differences in livestock density.

This leads to the following options for discussion:

- a) *A cost-sharing organisation should be required to differentiate contributions of farmers according to the individual risk of the farmer.*
 - b) *A cost-sharing organisation should be required to provide a bonus (reduction of contribution) for farmers that take specific measures to decrease their individual risk.*
 - c) *A cost-sharing organisation should be required to differentiate contributions by taking into account regional differences in risk.*
7. ***The compensation payment made by the cost-sharing scheme to a farmer for losses in case of disease outbreak has to involve a deductible.*** There are costly production management decisions, which are not observable and verifiable for a cost-sharing organisation at reasonable cost. Many of these decisions influence the probability of losses caused by epidemic livestock diseases, e.g. hygienic and bio-security measures. In order to provide incentives for risk-reducing measures, loss risk should not be completely transferred to a cost-sharing organisation. Thus a farmer has to bear some financial consequences of a disease outbreak up to a deductible, which could be defined as a share of the sum assured, e.g. 10% of herd value. Losses exceeding the deductible will be indemnified.

8. ***The compensation payment made by the cost-sharing scheme to a farmer for losses in case of disease outbreak has to depend on the time of reporting the suspicion.*** There are also costly production management decisions that influence loss size, which are mainly emergency reaction decisions after disease-outbreak. In order to provide incentives for loss reduction, the compensation should not indemnify high losses completely (e.g. through a proportional coinsurance rate for high losses⁸). The most important loss size-reducing measure is early reporting of (suspected) disease-outbreaks so that control measures can be applied in good time. The number of diseased or dead animals can serve as a signal for the time-lag between the time when first symptoms could have been detected and the time of reporting. It is best practice of some existing cost-sharing schemes to apply reduction of compensation for animals that are diseased or dead at the time the disease is reported to the authorities. For example, the Dutch Animal Health Fund generally compensates only 50% of the value of diseased animals, dead animals at the time of reporting are not compensated at all. Animals that are diseased or die after the outbreak is reported to the authorities are compensated fully.

This leads to the following options for discussion:

- a) *A cost-sharing organisation should apply current best practices and compensate only 50% of the value of diseased animals at the time of reporting, and not at all dead animals.*
 - b) *A cost-sharing organisation should further differentiate compensation rules for diseased and dead animals at the time of reporting depending on the characteristics of the disease, to take into account differences in morbidity and mortality.*
 - c) *A cost-sharing organisation should apply other compensation rules that provide incentives for early reporting (please specify).*
9. ***The cost-sharing scheme has to cover all production risks to avoid providing adverse incentives (not including price risks, see rule 11).*** Existing cost-sharing schemes mainly indemnify direct losses such as the value of compulsory, pre-emptive and welfare slaughtered animals and organisational costs related to destruction, monitoring etc. Consequential losses such as production losses directly related to regulatory measures (e.g. movement restrictions) are not covered. In some countries private insurance covers consequential losses, but in most countries the market is not well developed and demand is low. The main disadvantage of compensating direct losses at a higher rate than consequential losses is that farmers may have the possibility to partly shift consequential into direct losses. For example a farmer facing production losses due to movement restrictions that are not compensated could theoretically shift these losses, through intentional infection of his livestock, into losses caused by compulsory slaughtered animals that are compensated. These adverse incentives have to be avoided when indemnity rules are designed, as even a limited number of irresponsible individuals can have a significant impact on the spread of disease. One category of losses must therefore not be compensated at a lower rate than another category of losses when risks can be transferred by the farmer from the former to the latter category. Cost-sharing schemes that aim to provide significant risk transfer from farmers to cost-sharing organisations have to base compensation payments on the sum of all financial consequences of production risks caused by control measures ordered by veterinary authorities.

10. ***Some losses may be indemnified fully without providing adverse incentives.*** Losses that cannot be influenced by farmers at all should be fully indemnified in a cost-sharing scheme that aims at providing the highest possible risk transfer to farmers. This consideration is mainly relevant for losses, which are directly related to regulatory measures, e.g. costs of emergency vaccination etc.

⁸ A proportional coinsurance rate for high losses means that farmers have to bear a certain fraction of that share of a loss that exceeds a certain threshold

However, if a highest possible risk transfer to farmers is not intended, it is also possible to only partially indemnify this type of losses without affecting incentive compatibility.

This leads to the following options for discussion:

- a) A cost-sharing organisation could compensate fully losses, which are directly related to regulatory measures and cannot be influenced by farmers, e.g. costs of emergency vaccination etc.
- b) A cost-sharing organisation could compensate partly losses, which are directly related to regulatory measures and cannot be influenced by farmers.

11. **Price risks should not be covered by a cost-sharing scheme.** Farmers have to bear severe price risks, as market prices for animals can drop significantly following a serious livestock epidemic. However, price risks can be adequately managed on futures markets or other similar instruments and would therefore not have to be covered by a compulsory cost-sharing scheme.

12. **Losses of animal value have to be indemnified not according to pre-crisis market prices, but according to replacement values.** This loss assessment rule applies to total losses of animal value due to compulsory, pre-emptive and welfare slaughtering. Also losses from a drop in value due to regulatory measures (e.g. resulting from emergency vaccination) have to be assessed according to replacement values. The currently used value assessment rule for compensation, the market value of the animal before the disease outbreak, could lead to similar adverse incentives as higher compensation rates for direct losses than for consequential losses. It could in some circumstances theoretically be beneficial for a farmer to intentionally infect healthy animals whose value dropped in order to achieve higher ex-ante market prices for compulsory culled animals. It is also possible that epidemics lead to higher replacement costs. These costs are compensated through a cost-sharing scheme when indemnification is based on replacement values. When animal markets break down after a disease-outbreak, replacement values will be determined as soon as markets have picked up again and stabilised.

13. **Some production losses that are hard to quantify can be compensated with flat rates.** Business interruption and other costs related to movement restrictions may be hard to quantify, as they often manifest in work or opportunity costs. These can be indemnified through daily rates for the time period when restrictions are in place. These rates should be negotiated ex-ante between farmer and cost-sharing organisation, and as a matter of course determine the farmer's contribution to the scheme.

The following table summarises possible compensation rules of an efficient cost-sharing scheme:

Risk	Loss	Recommended compensation
Production risks caused by control measures of veterinary authorities	Total loss of animal value due to compulsory, pre-emptive and welfare slaughter	Indemnity function featuring a deductible and a proportional coinsurance rate. Assessment of animal values according to replacement values
	Partial loss of animal value due to control measures like compulsory emergency vaccination or moving or marketing restriction causing exceeded maturity for slaughter	Full compensation, based on replacement values
	Monetary expenses directly related to control measures, e.g. costs of emergency vaccination etc.	Full or partial compensation, depending on the intended level of risk transfer
	Costs caused by control measures which are hard to quantify, e.g. opportunity costs, costs of business interruption etc.	Ex-ante negotiated flat-rate compensation
Price Risks	Price decreases (occurring to all farmers, directly affected by control measures or not)	Not covered through a cost-sharing scheme, possibly secured on markets through futures

4.3. Balancing costs and responsibilities, compatibility with Community requirements (criteria III-V)

Criteria III to V presented above relate to balancing costs and responsibilities of farmers and governments (criteria III), competition (criteria IV) and compatibility with EU requirements and ongoing initiatives (criteria V). Based on an initial analysis of the evaluation team the following rules for harmonised cost-sharing schemes could be proposed:

14. ***A harmonisation of cost-sharing schemes in the EU must avoid a distortion of competition.*** Current compensation schemes for direct losses of certain diseases differ significantly between Member States with respect to farmers' contributions (with coverage by farmers of 100% of the national share up to a certain threshold to no farmer contribution at all). This may distort competition. Therefore any public contribution (Community and Member State national/regional contribution) to a cost-sharing scheme should be designed to avoid a distortion of competition. Guidelines on State aids have to be taken into account.

15. ***The level of public financial support to cost-sharing schemes and the risk transfer between regions is a political decision.*** The specific design of the proposed rules is not related to the degree to which public contributions are provided to cost-sharing schemes. An efficiency condition of a cost-sharing scheme is that it has to demand risk-adjusted contributions. This implies that the expected compensation payments of a cost-sharing scheme should be ideally covered fully by farmers' contributions (ex-ante or ex-post). On the other hand, public intervention may be required to safeguard that in the case of disease outbreak adequate action is taken immediately. Additionally, a cost-sharing scheme has to incur additional expenses for determining and implementing efficient safety standards (including prevention measures), which could be easier implemented with public support. Any approach taken has to balance these aspects.

This leads to the following options for discussion:

- a) *Public financial support to cost-sharing schemes (sum of Community and Member State contribution) could be similar to the current approach, i.e. fixed percentages of losses for specific diseases could be funded in case of disease outbreak (possibly depending on the category of disease, i.e. DHE, DLE).*
- b) *Public financial support to cost-sharing schemes could be a pre-defined flat-rate compensation per animal affected in case of disease outbreak (possibly depending on the category of disease).*
- c) *Public financial support to cost-sharing schemes could be to balance the account of a cost-sharing scheme after severe disease outbreaks, i.e. state-run reinsurance, loan facilities.*
- d) *Public financial support to cost-sharing schemes could be to support the scheme on a regular basis with a fixed sum per animal covered to fund the implementation of efficient safety standards (including prevention measures). No additional public contributions would be given in case of disease outbreak. This would mean a "decoupling" of contributions from disease outbreaks.*
- e) *Public financial support to cost-sharing schemes could be withdrawn fully.*

Please note that not all options may be competitiveness and incentive neutral and may involve a risk-transfer between regions.

4.4. Flexibility of implementation at the national / regional level (criteria VI)

Criteria VI presented above relates to flexibility of implementation of any harmonized scheme. Based on an initial analysis of the evaluation team the following rule for harmonised cost-sharing schemes could be proposed:

16. *Public involvement does not determine institutional arrangements of a cost-sharing scheme.*

Any cost-sharing scheme has to fulfil three tasks: Efficient animal health standards firstly have to be developed, and secondly to be implemented. Thirdly, a cost-sharing scheme has to compensate losses. These tasks can be fulfilled through one or more institutions. They can be realised in a variety of institutional arrangements, each of which involves assets and drawbacks. Likely options that mainly build upon institutional models already existing in some Member States include funds and public or private insurance:

- **Option A1 - Public fund:** A fund administered through a public authority could perform all tasks of an efficient cost-sharing scheme. A public fund could be expected to be accepted among farmers. It would however require additional effort for the authority to perform all the tasks associated with an efficient cost-sharing scheme, in particular related to risk-adjustment of farmers' contributions. A public fund can be financed through ex-ante levies, ex-post levies or a combination of both. As long as these contributions reflect risk, efficiency is not affected.
- **Option A2 - Mutual fund:** A mutual fund is owned by the participating farmers, it works like a private risk pool of the farming industry. This may lead to a high acceptance among farmers. Due to its ownership structure, a mutual fund is expected by the members to act in the interest of the farmers. A mutual fund would have similar problems like a public fund regarding risk-adjustment of contributions. From a legal point of view, it may be problematic to impose compulsory participation in a mutual fund.
- **Option B - Public insurer:** A public insurer is an independent organisation that implements politically determined safety standards and undertakes insurance functions. Its status as an independent organisation makes a public insurer to some extent autonomous of elected governments. It is therefore more likely to implement a risk-adjusted premium structure, as this involves discrimination between farmers. Thus a public insurer could possibly provide better incentives for risk-adjusted farm management than a fund solution.
- **Option C1 - Competitive insurance market:** Farmers have to obtain a contract with one of a number of competing insurers. As DHE-risks pose a severe loss accumulation potential, private insurers would demand high safety loadings. In order to establish an insurance market with reasonable prices, a state-run reinsurance is necessary. Also, this option requires thorough control of the efficiency of the animal health standards, determined in the insurance contracts with farmers, through the public authorities.
- **Option C2 - Private insurers' pool:** A private insurers' pool is a cooperation among private insurers, who jointly establish and own the pool company that operates the cost-sharing scheme. Through establishing a private insurers' pool, existing underwriting know-how of insurance companies can be directly used. The pool would demand risk-adjusted premiums, thus providing incentives for considering risk in farm management decisions. As with the previous scheme, a state-run reinsurance and/or other forms of public support (e.g. financial contribution towards the premiums paid by farmers) may be required.

The options are described in more detail in the Annex.

5. Invitation to provide comments

The evaluation team kindly invites experts and stakeholder organisations to comment on the preliminary conclusions presented in this working paper. Please structure your comments according to the following questions:

- a) Do you agree with the criteria for harmonised cost-sharing schemes presented in section 2? Please justify your statements.
- b) Do you agree with the proposed rules for harmonised cost-sharing schemes 1 to 15 of this document (presented in section 4)? Please justify your statements and structure your comments according to the number of the rule/option.
- c) Do you see specific advantages/disadvantages in any of the institutional arrangements for a cost-sharing scheme presented in rule 16 and in the Annex? Do you prefer any other institutional arrangement?
- d) Should only farmers be obliged to contribute to a compulsory cost-sharing scheme, or should related food-chain industries contribute as well?

For more information on the evaluation please visit the evaluation website (http://europa.eu.int/comm/food/animal/diseases/strategy/cahpeval_en.htm).

Do not hesitate to contact us should you have any further questions:

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Annex: Detailed overview over likely options for institutional arrangements for cost-sharing schemes at the national level

Funds

- **Option A1 - Public fund:** A fund administered through a public authority could perform all tasks of an efficient cost-sharing scheme. If the public authority is the veterinary authority itself or operating under its responsibility it may be able to enforce compulsory participation in the public fund with lower transaction costs than other options, because it already has databases of farmers in the operating region and performs veterinary controls. A public fund could be expected to be accepted among farmers. On the one hand, the fund can accumulate reserves in years with low losses, which can be used to cut contributions for the following years. On the other hand, farmers would not be afraid that their contribution is a subsidy to other producers, especially when the region where the fund is operating is homogenous in risk exposure. It would however require additional effort for the authority to perform all the tasks associated with an efficient cost-sharing scheme, in particular related to risk-adjustment of farmers' contributions, because differentiation of contributions is costly and does not directly influence loss distribution. Most likely, a public fund would demand flat-rate contributions, differentiated only by type of animal (as can be observed in existing schemes). This contribution structure omits risk-relevant production characteristics and thus fails to provide incentives for efficient risk-relevant management decisions, which could be mitigated by regionally differentiated premiums. A public fund can be financed through ex-ante levies, ex-post levies or a combination of both. As long as these contributions reflect risk, efficiency is not affected. If ex-post levies are applied, the contribution structure however has to be determined ex-ante, so that the incentives provided by risk-adjusted contributions are effective. An existing example for a system of public funds is the "Tierseuchenkassen" of the German Länder. These observations are also valid for cases such as the Netherlands, where a bank guarantee has to a large extent replaced the previously existing fund and semi-public bodies, the Product Boards, collect contributions.
- **Option A2 - Mutual fund:** A mutual fund is owned by the participating farmers, it works like a private risk pool of the farming industry. This may lead to a high acceptance among farmers. Due to its ownership structure, a mutual fund is expected by the members to act in the interest of the farmers. As the determination of efficient animal health standards also has to take into account external costs for non-farming industries, a mutual fund could be reluctant to implement efficient collective animal health measures and a public authority would need to be involved in standard setting. A mutual fund would have similar problems like a public fund regarding risk-adjustment of contributions. From a legal point of view, it may be problematic to impose compulsory participation in a mutual fund.

Public insurance

- **Option B - Public insurer:** The basic idea of a public insurer is to establish an independent organisation that implements politically determined safety standards and undertakes insurance functions. A public insurer could also be an accepted solution for a compulsory cost-sharing scheme among farmers (similarly to a public fund). Contributions of farmers are either spent for farmers, e.g. for collective animal health measures, or saved for farmers, e.g. through accumulating reserves and allow for reduced future contributions. A public insurer has to follow the veterinary authority's policy as far as it is obliged to implement efficient animal health standards. Transaction costs involved with implementing these standards depend on how the enforcement of these standards can be combined with official veterinary controls. Its status as

an independent organisation makes a public insurer to some extent autonomous of elected governments. It is therefore more likely to implement a risk-adjusted premium structure, as this involves discrimination between farmers, which is a difficult “business” principle for public administrations. Thus a public insurer could possibly provide better incentives for risk-adjusted farm management than a fund solution. The establishment of a public insurer may, however, from a legal point of view be problematic, since it would be a public monopolistic insurer.

Private Insurance

- **Option C1 - Competitive insurance market:** The idea of this option is to establish a private insurance market for the relevant risks, where farmers have to obtain a contract with one of a number of competing insurers. Private insurers conduct an underwriting process before contracting in order to calculate a premium that is sufficient to cover expected losses and administrative costs. This premium also contains a safety loading so that the insurer can bear losses exceeding expected loss size. It can be expected that risk-adjustment of premiums would be more sophisticated in a cost-sharing scheme with private insurers, thus providing better incentives for risk-adjusted production decisions. As DHE-risks pose a severe loss accumulation potential, private insurers would demand high safety loadings. In order to establish an insurance market with reasonable prices, a state-run reinsurance is necessary. A cost-sharing scheme for diseases with high externalities involving obligatory coverage on private, competitive and unregulated insurance markets could, however, lead to acceptance problems. The reason is that farmers are obliged to fund marketing expenses and shareholder profits among others, which do not benefit them. Therefore transaction costs of a cost-sharing scheme involving a competitive insurance market could be relatively higher than with other approaches. Also, this option requires thorough control of the efficiency of the animal health standards, determined in the insurance contracts with farmers, through the public authorities.
- **Option C2 - Private insurers’ pool:** A private insurers’ pool is a cooperation among private insurers, who jointly establish and own the pool company that operates the cost-sharing scheme. This type of scheme has similarities with the Spanish Agroseguro system, which currently only provides cover for selected diseases (however, a new insurance product for FMD is currently under consideration). Through establishing a private insurers’ pool, existing underwriting know-how of insurance companies can be directly used. The pool would demand risk-adjusted premiums, thus providing incentives for considering risk in farm management decisions. The transaction costs of this cost-sharing scheme option would be lower than in a private insurance market, as marketing expenses would be quite low here because there is just one insurer to contract with (directly or through the member insurers, such as the case with Agroseguro). On the other hand, costs of regulating the pool’s premiums have to be considered. As farmers would be obliged to contract with the pool (which is the main difference to the voluntary insurance of farmers through the Agroseguro system), this solution is politically not acceptable without premium regulation. Hence transaction costs are higher than in a cost-sharing scheme with a public insurer or public fund. A private insurers pool could also face acceptance problems among farmers, since profits accrue to shareholders. As with the previous scheme, a state-run reinsurance and/or other forms of public support (e.g. financial contribution towards the premiums paid by farmers) may be required.

Annex 4: Responses received on the working paper on options for harmonised cost-sharing schemes presented at the workshop on 17 March 2006

- AVEC – Association of Poultry Processors and Poultry Trade in the EU Countries
- CEA – Comité Européen des Assurances
- Copa Cogeca
- DG SANCO
- FESASS – European Federation for Animal Health and Sanitary Security
- UECBV – European Livestock and Meat Trading Union
- Ministry of Agriculture, Nature and Food Quality (Netherlands)
- Gesamtverband der Deutschen Versicherungswirtschaft (Germany)
- Federal Ministry of Food, Agriculture and Consumer Protection (Germany)
- Niedersächsische Tierseuchenkasse (Germany)
- Agroseguro (Spain)
- Ministry of Health (Italy)
- JIGWG – Joint Industry/Government Working Group on sharing responsibilities and costs for animal diseases (Secretariat England, UK)



Dr. Frank Alleweldt
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05-04-2006
CV/AMM

Dear Dr. Frank Alleweldt,

avec thanks you for giving the opportunity to contribute to the evaluation of the Community Animal Health Policy, in particular with regard to a harmonized cost-sharing scheme for epidemic livestock diseases.

My reaction follows the questions raised at the end of the working paper for the expert workshop on options for harmonised cost-sharing schemes for epidemic livestock diseases.

a) Do you agree with the criteria for harmonised cost-sharing schemes presented in section 2 of the working paper, i.e. Categorisation of animal diseases, Incentive compatibility, Balancing costs and responsibilities, Prevention of distortion of competition, Compatibility with EU financial instruments and ongoing initiatives, Harmonisation and flexibility of implementation?

The general criteria described in section 2 of the working document are valid for the current situation in which the EU and the MS in the majority of cases participate in the funding of the losses caused by an outbreak of animal disease.

However, some Member States have introduced different cost sharing practices which affect competition. It can be asked how this could have happened and why the European Commission has failed to avoid this situation.

It is probably more efficient and effective to focus on this. Future legislation should achieve a harmonisation of the schemes in such a way that Member States are bound by the European legislative framework and that the European Commission has and will use the competence to correct if and where needed.

In this context, **avec** would like to refer to the inspection fees which can differ a lot between Member States although there is a harmonised legal framework.

According to the working paper, there seems to be general support of the political decision that a cost-sharing scheme will be introduced in the whole EU, although it seems that such a scheme only exists in a minority of the Member States.

b) Do you agree with the proposed rules for harmonised cost-sharing schemes 1 to 15 of this document (presented in section 4)?

Legal animal health standards should be on the efficient or the optimum level as the consequence of the application of lower standards on one farm directly affects the animal health interest or risk on farms with higher standards. The standards should take into account both losses caused by epidemic livestock diseases and the costs of the increased health standards.



Categorization of the relevant or important animal health diseases has to be done on EU level to safeguard the animal health situation in the EU.

The introduction of a voluntary cost-sharing scheme for some animal diseases seems to be contradictory to the principle of prevention of distortion of competition if the Member States and/or the EU participate in the financing.

The working paper is written from the point of view that the farmers have to participate in the finance of the costs anyhow, which is a political choice. It is a misunderstanding that such a system would increase the commitment and responsibility of the farmer. It must be recognised that the farmer and the industry have a big interest in preventing an epidemic disease as the consequential losses, today not covered by any insurance scheme, are often at least as high as the direct losses. The commitment of the involved livestock sectors in combating a disease outbreak is indispensable for the best success and should not depend on the financial participation.

If farmers participate in a cost-sharing scheme, it must be ensured that it is done in a harmonised way, for example by taking into account the economic value and turnover. One can wonder if this would not already be a sufficient incentive. Other incentives, e.g. a bonus–malus scheme, should regard issues that the farmer can influence and improve directly and should preferably be harmonised as well.

It looks as if the working paper is focusing on the increase of the own risk of the farmers. But it is an undeserved reproach as it suggests that farmers do not behave in a responsible way. Assessing farmers' decisions in the past should be based on the knowledge and expertise available at the time when the decisions have been taken.

It is very hard to draw a clear line in the losses that should be compensated, in particular if you look at the consequential losses. Currently only the direct losses on the farm and in the hatcheries related to animal health and animal welfare are considered to be compensated. At least, this should be continued. It will be very complicated to introduce an EU compensation scheme for consequential losses. **avec** has doubts that such a scheme not only for farmers could be established.

c) Do you see specific advantages/disadvantages in any of the institutional arrangements for a cost-sharing scheme presented in rule 16 and in the Annex? Do you prefer any other institutional arrangement?

The working paper distinguishes three tasks for a cost-sharing scheme. Firstly, efficient animal health standards have to be developed, and secondly they have to be implemented. Thirdly, a cost-sharing scheme has to compensate losses. These tasks can be fulfilled through one or more institutions. They can be realised in a variety of institutional arrangements, each of which involves assets and drawbacks. Likely options that mainly build upon institutional models already existing in some Member States include funds and public or private insurance. It should be possible that the involved parties in each Member State decide on their own institutional arrangement, but the European Commission has to ensure that this will not lead to distortion of competition. Therefore, the rules have to be clear and transparent.

Knowing that after an outbreak of disease the farmers can decide to quit, the fund should mainly be financed through ex-ante levies and partially through ex-post levies as the level of compensation at the end is difficult to forecast.



d) Should only farmers be obliged to contribute to a compulsory cost-sharing scheme, or should related food-chain industries contribute as well?

avec would like to stress once again that the question takes for granted that livestock farmers will have to contribute to a compulsory cost-sharing scheme, which would be a political choice and decision. The answer to the question of who will contribute in such a scheme depends on which losses will be compensated.

If the current system is continued, it should be the livestock farmers who have to contribute. It will complicate matters too much if the industry has to contribute as well since animals can be slaughtered in another Member State. The principle to be applied in a compulsory cost-sharing scheme should be that each part of a sector contributes to the finance of the compensation which is to his benefit.

If a compensation scheme for the industry is introduced, it should regard consequential losses as a consequence of measures to be taken on and around an infected farm.

Yours sincerely,
avec

A handwritten signature in black ink, appearing to read 'T. Lysgaard', is written over a light grey circular stamp or watermark.

T. Lysgaard
Secretary General

Cc: Eric Marin, DG Sanco

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AGR 6020 (03/06)
Paris, 30 March 2006

COMMITTEE FOR THE INSURANCE OF AGRICULTURAL RISKS

Dear Dr Alleweldt,

The Committee for the insurance of Agricultural Risks of the Comité Européen des Assurances (CEA) has analysed the content of the so-called 'Working paper for the expert workshop on options for harmonised cost-sharing schemes for epidemic livestock diseases', which was the purpose of the meeting held on 17 March in Brussels, at the "Albert Borschette Conference Centre".

In accordance, also, with the comments made during the meeting and the verbal conclusions reached, the CEA would like to bring the following conclusions to your attention:

1. The private insurance industry is specialised in providing cover for the financial consequences of all manner of risks, including those resulting from epidemic livestock diseases which can reach catastrophic levels.
2. From the insurer's point of view, the setting up of this kind of cover, whether at a regional or national level, requires the following information at the very least in order to delimit the risk to be covered and the compensation payable:
 - a) Precise definition of the epidemic diseases whose financial consequences are the object of cover. That is, preparation of disease categorisation.
 - b) Definition of the type of costs that are to be the object of cover. As the consequential costs are higher, once defined they shall determine a higher cover price.

In all cases, the establishment of 'deductibles' not only lowers the cost of this cover but also provides the insured farmer with an incentive to respect the preventive and control measures put in place, if applicable, by the public authorities, which in turn contributes to minimising the so-called 'moral hazard'.

3. With regard to the different formulas that may be established to tackle the losses caused through epidemic diseases (point 4.4 of the working paper), the Committee for the insurance of Agricultural Risks reiterates the comments made to Mr Ahner of the DG AGRI on 14 April 2005 based on the document entitled 'Communication from the Commission to the Council on risk and crisis management in agriculture', concerning the so-called Mutual Funds. That is, clear definition should be given on the legal nature and the operating conditions of these funds and the way in which the public authorities will react in the event that these dry up, given that conflicting situations concerning free competition could arise due to the lack of regulation of these funds.

4. In any case, the Committee for the insurance of Agricultural Risks wishes to confirm its desire to contribute to the cover of these risks providing that the official requirements set forth by the CEA are satisfied:
 - a) State contribution to the cost of the insurance premiums.
 - b) The possibility of using the co-insurance or co-reinsurance formulas to strengthen and reinforce cover capacity for these types of risk.
 - c) The setting-up of a public reinsurance system that allows claims excesses as a result of an epidemic disease to be met.

Should you require further information, please contact the CEA Secretariat.

Best regards,

Antonio Fernandez

Chairman of the Committee for the Insurance of Agricultural Risks

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Copy to Mr Marin (DG Sanco)

QV(06)92L1

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Brussels, 29 March 2006

Re: Community Animal Health policy, follow-up 17 March 2006 meeting on a harmonized cost-sharing scheme for epidemic livestock diseases - COPA-COGECA written contribution

Dear Dr Alleweldt,

COPA-COGECA would like to thank you and the Consortium for having been invited on 17 March 2006, together with other stakeholders to discuss, in the presence of the Commission, the options you presented for a harmonized cost-sharing schemes for epidemic livestock diseases.

As it was suggested at the end of the meeting, COPA-COGECA wishes to put in writing some of the key reactions we expressed on the working paper you presented on 17 March 2006 meeting [QV(06)66X1].

General position on the financing of future CAHP

Referring to a general position on the future Community Animal Health policy (CAHP) as adopted by both COPA and by COGECA Presidia [PR(06)58F1] the following has to be said in particularly as regard the financing of the future CAHP:

Agriculture as a whole deals with elements which are so basic to public interest, to animal health and to public health, that it should be largely accepted that there must always be reliable public intervention and support to this sector.

Moreover, as it is farmer's responsibility to ensure all the food they produce is safe and produced according to the regulatory requirements - including those related to animal health - it is the public authority's responsibility to ensure that the products respect EU legislation.

Farmers cannot be left alone to assume the responsibility for and the cost of measures to control animal diseases and their consequences. Often, despite appropriate preventive measures, farmers are faced with threats over which they have little, and in most case no, control.

In this respect, this is why the existence of the current EU Veterinary Fund should not be questioned; neither should the balance between community and national co-financing of animal health measures.

Specific consideration on the working paper presented at the meeting

In the working paper 4 alternatives for harmonized cost sharing are presented:

- A: Continuation of the current system of expenditure in the veterinary field
- B: Financing costs of disease control through ad-hoc measures in case of disease outbreak
- C: Setting up a unified cost-sharing scheme at the EU level
- D: Defining a harmonized Community framework for national or regional cost-sharing schemes.

Based on a series of six criteria for a harmonized cost-sharing scheme, the working document analyzes superficially the pros and cons of each of the four alternatives and comes to the conclusion that option “D” is the most appropriate way forward.

COPA-COGECA **cannot** subscribe to this in particular because the starting point of the argument is that the farmer individually (micro – economic approach) is supposed to find the solution to a problem of general concern – EU public and animal health (mostly macro – economics)

Moreover, COPA-COGECA also notes that none of the three options A, B nor C have been thoroughly analyzed and have been a little too quickly “set aside”.

COPA-COGECA favors option “A “and the following arguments strive at finding solutions for the improvement of the current system.

Simplification

COPA-COGECA believe that one of the key underlying objective of the current CAHP review is to strive at developing a more operational and simplified system both for the Competent authorities and for farmers.

COPA-COGECA is therefore of the opinion that a new system, like the harmonized community framework for cost-sharing schemes presented by the Consultants, does not fit this objective of simplification.

By keeping the current system and by improving it where it lacks efficiency is to our opinion more constructive and an easier road to go by. Three out of the six reference criteria set out in the working document are met and three need consideration. We will concentrate on the latter:

1. Prevention of distortion of competition (criteria IV)
2. Balancing costs and responsibilities (criteria III)
3. Incentive compatibility (criteria II)

1. Prevention of distortion of competition [Public responsibility: EU and National - Public financing : EU and National]

COPA-COGECA believes that the EU animal health policy should continue to be governed by EU legislation and has to be developed at EU level, thus an EU financial tool must remain in place.

In the working document there appears to be no EU funding foreseen but only a harmonized community framework for national or regional cost-sharing schemes.

COPA-COGECA believes that current system balancing EU and national financial contribution has to be maintained (the % can be discussed if need be).

However, the current system could be improved by developing EU guidelines as regard the national financial contributions so as to ensure that this is dealt with in a harmonized way throughout all 25 EU Member States, thus avoiding distortion competition. These guidelines would explain how much and in which cases national public contribution could be allocated.

2. Balancing costs and responsibility [Farmer responsibility - Farmer financing]

COPA-COGECA has clearly stated that at farm level Biosecurity has played a significant role in the containment and elimination of outbreaks. Routine management practices should now be examined in the context of this information, whilst bearing in mind that the exact nature of such measures might vary from disease to disease.

Good hygiene rules and proper disinfecting are necessary as well as codes of good practice at farm level to take into account both animal and public health aspects and veterinary inspections.

All costs related to these measures taken at farm level, are currently born by the farmer and contribute on a daily basis to prevent both endemic and enzootic animal diseases from occurring.

For this reason, COPA-COGECA suggests that in a future CAHP 2007 - 2013, financing of prevention (bio-safety measures) could be envisaged, possibly via rural development measures (for example like the agro-environmental measures, or investment aids).

Moreover, COPA-COGECA would like to suggest that some consideration be given to envisage extending the scope of the contributors, for example to other partners in the food chain all the way to the final consumer.

3. Incentive compatibility [Communication - Decision making]

To ensure good understanding and acceptance of any farmer of the future CAHP, and to ensure his/her involvement, appropriate communication on each actor's responsibility of risk management has to be clearly explained to him/her. It is essential to have them involved in the decision making process.

This will create incentive and motivation to want to play an active and positive role in maintaining a high level animal health in the EU.

COPA-COGECA thanks you in advance for considering the above reflections and proposals and look forward to have further opportunities to actively contribute to the ongoing debate concerning the future CAHP in general and on cost-sharing in particular.

Sincerely,

Franz Josef FEITER
Secretary General

Copy: Eric Marin DG SANCO



Brussels,
GS D(2006)

NOTE TO THE ATTENTION OF THE CAHP EVALUATION TEAM

Subject: Comments of the DG SANCO ‘on-the-spot’ audit team with regard to the Working paper on ‘Options for Harmonised Cost-sharing Schemes for Epidemic Livestock Diseases’.

The DG SANCO ‘on-the-spot’ audit team is involved in auditing the considerable veterinary expenditure on the livestock crises and the subsequent remarks are hence of a financial control and budgetary nature. These comments represent the personal views of the auditors, based on their audit experience, and are made on their own initiative.

1. BUDGETARY LIMITATIONS (RULE 15)

The option to continue the current method of financing veterinary epidemics is rejected in the working paper, as it could lead to adverse incentives, differentiation in level of responsibility and distortion of competition. Another reason must, however, not be neglected. The ceiling on agricultural expenditure until 2013, set by Council in 2002, may cause problems for the Community to pay its 50% or 60% share of the eligible costs of livestock epidemics. A new financing system should take account of the limited financial capacity and possibilities of the Community budget.

2. CONCERTED APPROACH BETWEEN VETERINARY AND MARKET SUPPORT (RULE 9)

A concerted approach between veterinary and market-support expenditure related to a livestock epidemic is essential. Community expenditure on the 1997/98 CSF crisis, for example, was for large part market support expenditure, further to disturbance of markets as a result of transportation bans. At the time veterinary and market expenditure were managed by the same directorate-general.

During the 2003 Avian Influenza outbreaks in the Netherlands and Belgium, separate Community support measures were taken for eggs which had been processed industrially, for day-old chicks culled on welfare grounds, and for destroyed animals and eggs in protection zones around outbreaks.

Also, differences between Member States with regard to veterinary culls need to be considered. Culls in wide (buffer) zones around outbreaks have been financed. Without

jeopardising veterinary objectives, further harmonisation, on the basis of the contamination risk of a holding, would be beneficial.

Any future financing scheme needs to ensure that no adverse incentives are created by differentiation in financing and that Community support is guided by principles established in advance, which clear financial expectations for farmers.

3. LIMITING ERADICATION COSTS (RULE 10)

Decision 90/424/EEC stipulates that the Community also contributes towards 'other costs of eradicating the disease'. These other costs include costs for disinfecting, destruction, etc. Experience has shown that they can rise disproportionately with regard to direct costs. For any cost sharing scheme it would be important to ensure that such costs stay within limits. A percentage of the value of the compensated animals, or a flat rate per farm, may for example be used. In practice limiting costs can be achieved by entering into framework contracts in peace time, with the necessary destructors, transport firms and other companies. This approach should have a expenditure reducing effect on the authorities running the disease eradication.

4. ANIMAL VALUE (RULE 12.)

At this moment Decisions 90/424/EEC speaks of '*swift and adequate*' compensation. Details on the method for calculation are laid down in Commission Decision (EC) 349/2005. In practice market prices immediately before culling are used to determine the value for compensation of animals, while assuring animals are never under- or overvalued. In 2005 ceilings on payments per animal were already introduced through the mentioned Commission decision. It is essential that the value paid for an animal serves the veterinary objective (eradication of the disease) in the first place. Harmonising the method to calculate this adequate value is welcomed and would enhance equal treatment of member states.

Replacement values would indeed enable covering losses not only of culled, but also of vaccinated animals, processed eggs, unmarketable milk, etc. However, *swift* compensation of farmers after a crisis would be difficult using replacement values as markets are by definition not stable after a crisis and fair prices will be very difficult to establish. At the same time the objective is not specifically replacement of animals similar to animals culled, but compensating a loss or recommencing a farm operation. It seems that a system using *pre-crisis or pre-cull prices*, for example with scales and possibilities for a fixed % increase or decrease, may be fairer. In any case Member States should establish in advance which systems and information sources will be used to establish the relevant compensation.

5. FLAT RATES (RULE 13)

When it is decided to include compensating production losses, consequential losses, etc, in a financing scheme, introduction of flat rates for such compensation is supported. However, depending on the system adopted, flat rates may lead to inequality between Member States or holdings.

Generally speaking, with regard to animal value and the previously mentioned eradication costs as well, a form of *decoupling* of compensation should be introduced. Flat rates simplify controls and decrease costs of administration.

6. ADMINISTRATIVE RESPONSIBILITIES FOR MEMBER STATES (RULE 14)

With regard to compatibility of a new scheme ‘with EU financial instruments and ongoing initiatives’ it is important to underline that any cost sharing scheme should provide for sufficient controls on the public funds spent. At the moment the Commission is increasing the responsibility of Member States with regard to financial controls on spending of Community funds. As spending on livestock epidemics by nature has an emergency character, this mainly implies advance preparation of administrative procedures, standard contracts, etc.

Jerome Boehm
Head of sector on-the-spot controls

Copie: Mr. Shotton, Mr. Janssens, Mr. Vandenberghe, Mr. Marin, Ms. Garau, Mr. Reviergo Gordejo



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Bruxelles, 6 avril 2006

Objet : Observations et propositions sur les réflexions concernant l'adoption d'un système harmonisé de partage des coûts suite à la réunion du groupe d'experts du 17mars 2006.

Cher Monsieur,

La FESASS tient à vous exprimer tous ses remerciements ainsi qu'aux services de la Commission pour l'avoir associée, en compagnie des autres parties prenantes, à la réunion d'experts du 17 mars dernier, consacrée à la réflexion sur différentes options de systèmes harmonisés de partage des coûts dans le cas d'épizooties. Comme il a été proposé lors de cette réunion, nous souhaitons vous faire part des commentaires et propositions de notre organisation

Remarques préalables : le respects de principes essentiels

La Politique Sanitaire conduite dans le domaine de l'élevage par les pouvoirs publics a pour objectif principal d'**organiser la prévention** et la lutte contre les grandes maladies animales. Or ces maladies sont souvent extrêmement contagieuses et concernent fréquemment la santé publique et/ou l'économie agricole dans son ensemble. Il s'agit donc de problèmes posés à grande échelle et sur lesquels chaque éleveur, individuellement, n'a aucune prise. Par conséquent, **toute politique sanitaire doit s'appuyer sur une démarche collective** pour être efficace.

Elle doit être articulée autour d'actions de maîtrise des risques et, si nécessaire, d'actions curatives. Une telle politique doit être transparente et emporter l'adhésion de toutes les parties prenantes. Concrètement cela signifie que ses objectifs, les voies pour les atteindre, les moyens à mettre en œuvre et les financements doivent être préalablement arrêtés, affichés et expliqués aux éleveurs.

De surcroît, face à des mesures aux conséquences extrêmement graves tant en matière de liberté que d'économie des exploitations, **il convient de disposer d'un système d'indemnisation équitable, rapide et simple.**

Considérant ces différents éléments, la FESASS estime qu'il est nécessaire de lier les questions relatives au financement à la réflexion actuellement menée sur les objectifs et les priorités de la Politique de Santé Animale Commune (PSAC). Il est en effet, essentiel de rappeler que ce seront bien les choix opérés sur l'avenir de la PSAC qui seront déterminants des financements à mobiliser et non l'inverse, même si ces choix doivent être faits dans le respect des contraintes économiques pesant sur les élevages et dans un souci permanent de maîtrise des finances publiques.

A./ Analyse de la réflexion conduite sur le partage des coûts

A la lumière de ces remarques préalables, il apparaît que la réflexion conduite par les évaluateurs pose trois problèmes majeurs :

- la nature délibérément restrictive des objectifs à atteindre,
- le choix d'un traitement microéconomique pour un problème macroéconomique,
- l'absence d'une véritable analyse coûts/bénéfices de chacune des options présentées.

a) Une analyse trop restrictive

Dans l'introduction du document de travail, il est précisé que le but de la Commission est d'« accroître d'avantage la responsabilité des parties prenantes en matière de prévention, de détection et de contrôle des maladies animales épidémiques majeures ». Partant de cette préoccupation, l'analyse conduit à l'élaboration de six critères déterminants pour la mise en place d'un éventuel système de partage des coûts. Or cette approche, certes, reprend l'une des recommandations formulée par la Cour des Comptes de l'Union européenne dans son rapport spécial n° 8/2004, mais ne tient pas compte du partage effectif des responsabilités au sein du Marché unique et des besoins de la PSAC pour garantir son efficacité.

En effet, très rapidement l'analyse se concentre sur la responsabilité de l'éleveur, recherchant les moyens de l'accroître. Or **la responsabilité de l'éleveur est d'ores et déjà très fortement engagée avec le cadre législatif et réglementaire actuel**. Il permet à la Commission et aux Etats membres d'exiger des éleveurs le respect des différentes mesures préventives et curatives en cas d'épizooties et d'autres maladies animales graves. De surcroît, **la conditionnalité des aides agricoles est venue récemment renforcer ce dispositif** avec une menace forte de pénalisation en cas de non respect des règles en vigueur. Il n'est donc pas utile de renforcer d'avantage la responsabilité des éleveurs. En revanche, **il est nécessaire de rappeler la responsabilité de chacun et notamment de la Commission et des Etats membres** en matière de protection des consommateurs et des entreprises agricoles face aux risques exogènes et endogènes ainsi qu'en matière de bon fonctionnement du Marché unique.

De plus, les contraintes déterminantes de l'efficacité de la PSAC ne sont pas prises en compte et notamment au regard de la transparence/simplification du volet financier ainsi qu'en matière de rapidité des indemnisations.

b) Un traitement microéconomique pour un problème macroéconomique

La démarche suivie s'appuie sur l'analyse du comportement individuel de l'éleveur face aux risques sanitaires et aux exigences réglementaires. Elle plaide ainsi en faveur d'un système d'assurances privées. Toutefois, l'argumentation utilisée est étayée par une modélisation de ce

comportement au niveau microéconomique, très intéressante, mais qui est obligée d'intégrer des contraintes macroéconomiques comme le coût social¹. Elle témoigne ainsi que la solution ne peut qu'être collective et donc réglée par une approche macroéconomique. **La nature macro - sanitaire des risques concernés plaide en ce sens ainsi que le principe sociologique qui établit que la somme des rationalités individuelles n'est pas équivalente à la rationalité collective.**

c) L'absence d'une véritable analyse coûts/bénéfices pour chaque option

Le traitement de chaque des options envisagées est opéré à la lumière des 6 critères retenus pour guider les choix. Toutefois, une analyse plus approfondie à la fois en termes de coûts et de bénéfices aurait mieux permis de mesurer les avantages et désavantages de chacune d'elles. On peut ainsi recenser trois critères d'analyse supplémentaires qui auraient dû être intégrés. Il s'agit de :

- du critère d'**acceptation sociale**, c'est-à-dire la capacité du dispositif à contenter toutes les parties prenantes mais aussi les consommateurs et les citoyens ;
- **l'efficacité et la rapidité** pour garantir une indemnisation juste et rapide garante de l'adhésion des parties prenantes au dispositif ;
- **la subsidiarité dans la mise en œuvre car la Commission n'a pas la compétence juridique** pour harmoniser les dispositifs complémentaires d'indemnisation et certaines priorités sanitaires supplémentaires peuvent également s'imposer au niveau local.

Ces critères modifient significativement les termes de l'analyse. L'élimination des trois premières options paraît ainsi trop rapide ou insuffisamment justifiée.

L'analyse présentée constitue donc une approche structurée de la problématique mais elle doit être révisée en profondeur tant en terme d'objectifs qu'en terme de méthodologie.

B./ Intérêt du Fonds Vétérinaire

Le Fonds vétérinaire tel que financé et utilisé actuellement constitue un outil très efficace de la PSAC. Il est l'instrument au service de la Commission pour garantir la solidarité au sein du Marché Unique. Face aux risques sanitaires impossibles à maîtriser parfaitement, il est essentiel que les éleveurs soient mobilisés en permanence. Le Fonds vétérinaire garantit cet engagement de tous en assurant une juste indemnisation en cas de crise sanitaire. Son élimination des options futures est donc irréaliste et abusive car elle se base sur cette approche microéconomique inadaptée à la nature du problème posé (cf. ci-dessus) et ne tient pas compte d'éventuelles possibilités d'amélioration de fonctionnement et surtout de l'impact des évolutions de la PSAC.

En effet, le Fonds vétérinaire s'inscrit dans **le respect du partage des responsabilités entre la Commission, les Etats membres, les autorités locales et les éleveurs**. Il est juste que **l'autorité** qui a la charge de conduire la PSAC et qui a ce titre **décide, en cas de maladie grave, de priver les éleveurs de la propriété de leurs animaux et donc du fruit de leur production, assume ses responsabilités et les indemnise**.

¹ Il n'est d'ailleurs pas tenu compte du bénéfice social du respect des standards d'hygiène en élevage qui vient corriger le point d'optimum social.

Il s'agit ici d'un principe juridique essentiel et incontestable étayé d'ailleurs très souvent dans les lois fondamentales des Etats membres comme c'est le cas en France où il est inscrit dans le bloc de Constitutionnalité (cf. article 17 de la Déclaration universelle des droits de l'Homme et du Citoyen). La Cour des comptes de l'Union européenne dans son rapport précité n'a d'ailleurs en aucun cas remis en cause ce principe. Son souhait porte uniquement sur la recherche des moyens nécessaires pour améliorer le fonctionnement du Fonds et garantir le budget de l'Union contre des dérives abusives.

Or dans son rapport la Cour souligne de nombreux dysfonctionnements dus, par exemple, à l'absence de règles d'indemnisation précises, fixées préalablement aux crises sanitaires et garantissant un traitement harmonisé au niveau de l'Union. Cette carence observée dans le cas des grandes épizooties de ces dernières années a été en partie comblée par de nouvelles dispositions réglementaires et la situation peut encore être améliorée en fixant un cadre strict pour les indemnisations.

De même, les menaces d'explosion des coûts budgétaires dénoncées par la Cour relèvent plus des priorités de la PSAC et de la stratégie suivie dans la lutte contre les maladies que dans la nature du mode de financement retenu. Le choix de la politique de non vaccination au Royaume uni a coûté bien plus à l'Union que les quelques fraudeurs. La révision de la PSAC devrait ainsi permettre de réaliser des économies notables.

Enfin, l'intervention du Fonds en second niveau, c'est-à-dire en remboursement des Etats membres, garantit l'Union contre les fraudes puisqu'elle dispose ainsi du temps nécessaire pour mener des investigations approfondies et de procéder à des réductions dans ses versements en fonction des erreurs ou infractions éventuelles constatées.

De surcroît, face aux récents élargissements de l'Union et à ceux qui se dessinent pour les prochaines années, le Fonds Vétérinaire de l'Union constitue un outil privilégié qui permet d'apporter des réponses efficaces pour stimuler l'action sanitaire et encourager l'organisation collective des éleveurs afin de garantir le succès de la prévention et de la lutte contre les principales maladies animales. En effet, il ne faut pas négliger la problématique posée par l'élargissement de l'Union à des pays où l'organisation sanitaire et vétérinaire des éleveurs au plan collectif, n'est pas suffisamment développée, voire même totalement inexistante.

Le Fonds vétérinaire de l'Union constitue donc le moyen le plus simple et le plus sûr pour garantir l'efficacité de la PSAC sur l'ensemble du territoire de l'Union et même hors de ses frontières, cependant des améliorations sont nécessaires.

C./ Les améliorations nécessaires

La FESASS avait indiqué dans sa note sur le processus d'évaluation que diverses améliorations sont envisageables. **Il est par exemple possible de réaliser d'importantes économies** au regard de certaines dépenses que ce soit dans la lutte et la prévention des ESST ou encore dans l'éradication des zoonoses comme la Tuberculose et les Brucelloses (cf. note de la FESASS sur le processus d'évaluation de la PSAC).

Mais c'est surtout dans l'évolution des choix stratégiques de la PSAC que résident les plus grandes marges de progrès. **En privilégiant les actions de prévention**, l'Union évitera de nombreuses crises sanitaires et donc s'épargnera le financement de mesures curatives. Ces

dernières sont des dépenses souvent très lourdes alors que les mesures préventives constituent un véritable investissement bien moins important en valeur, psychologiquement bien plus acceptable et facilitant l'adhésion de toutes les parties prenantes en servant de support pédagogique.

Il s'agit d'une orientation essentielle qui sera déterminante du succès de la PSAC future. De fait, avec les progrès considérables réalisés dans la lutte contre de nombreuses maladies animales, il convient de maintenir la vigilance des différents intervenants et seule une politique active de prévention sera en mesure de maintenir une bonne mobilisation et de positiver le rôle de chacun.

D./ Positiver le rôle des éleveurs

L'éleveur a un rôle essentiel souligné par la Cour des comptes de l'Union dans son rapport et par la Commission : il **est la première vigie** face aux maladies animales. Lui seul peut détecter une maladie dès l'apparition des premiers signes cliniques, mais surtout il peut éviter les contaminations en respectant les règles en vigueur et en adoptant toute une série de mesures préventives. Il convient donc de mener une action efficace de sensibilisation collective en s'appuyant par exemple sur la solidarité professionnelle.

La FESASS a souligné à ce propos que **des solutions complémentaires, et non alternatives**, pouvaient être étudiées pour assurer une solidarité entre éleveurs là où les fonds publics n'ont pas ou peu vocation à intervenir (cf. note de la FESASS sur le processus d'évaluation).

En conclusion, la réflexion présentée dans votre note constitue une approche trop restrictive du dispositif d'indemnisation des éleveurs. Elle devrait être revue en profondeur en se basant sur une nouvelle approche plus positive et plus collective du rôle de l'éleveur. Il n'est pas imaginable de construire un dispositif en se concentrant sur les risques de fraude dus à un pourcentage très faible d'individus et ce d'autant plus que le cadre réglementaire permet déjà d'apporter des réponses efficaces à ce problème. Enfin, il convient de laisser la subsidiarité jouer quant à l'organisation pratique afin de tenir compte des structurations existantes et des préoccupations locales.

Nous vous remercions par avance de prendre en compte ces différents éléments et nous tenons à votre disposition pour compléter votre information à ce sujet comme sur l'ensemble de la PSAC.

Nous vous prions de croire, Cher Monsieur, à l'expression de nos sentiments distingués.

Le Président

Bernard TERRAND



Brussels, 9th May 2006

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O/REF: JLM/ps/sb/**L-035-2006-EN**

RE: cost sharing scheme

Sir,

We thank you for having been given the opportunity to take part in the meeting on 17th March 2006 relating to means aimed at harmonization of the sharing of costs generated by epizootics in the European Union.

In addition, UECBV is grateful for the opportunity to actively contribute to the consultation and for the interest you showed in the general position of the organisation, which is provided by the present document.

The sector representing trade and industry for livestock and meat is indeed fully concerned by the problem referred to above. Generally the prejudice that epizootics cause to the sector operators is not considered correctly –it is even ignored– owing to the extent of the costs identified.

That is the reason why we wish to draw your attention to a number of points that would need to be examined and assessed:

1- Clarification of the scope of application

In December 2002 guidelines were laid down by the Commission for State aid concerning TSE tests, fallen stock and slaughterhouse waste (2002/C 324/02).

On the one hand concerning slaughterhouse waste, it should be emphasized that the guidelines are efficient since all competition distortions between Member States have since then nearly been removed.

But on the other hand concerning fallen stock in farms, competition distortions have not been removed after a three-year application: they even have increased in intensity. The level of distortion is high because of the amounts generated by rendering.

In its draft Regulation amending Regulation (EC) No 70/2001 the Commission is proposing to make this scheme perennial and we can be nothing but satisfied with this.

This presupposes that new guidelines on epizootics must be laid down for the sake of consistency.

Firstly, it should be essential to define whether mortalities due to epizootics are distinguished from other causes of mortality and under which modalities because such things do not exist at today's date.

Secondly, before clarifying the special case of epizootics, it should be essential to really harmonize the conditions on financing of on-farm fallen stock. A cost-sharing scheme should be imposed on Member States and clearly limited to Member States and farmers so that the latter are really interested in putting health risk under control.

In particular it should be clearly stated that, precluding all exceptions, the costs concerned are financed by means of fees or assurances. The waste-producing farmer or the State must be the one to be charged in all cases. No one else can free them from this!

Degrressive State aid over time might be contemplated so that Member States are able to concentrate (switch) their contribution on (to) control of epizootics and put an end to the competition distortions that are being reported.

But on the other hand concerning epizootics i.e. the object of the present consultation, it would be desirable that direct costs be fully paid by Member States and the European Union so that direct costs do not spread on to other economic protagonists, and Member States have full liberty vis-à-vis the farmer to hold under detention, to seize or –should the case arise- to slaughter the animals and, thereby, to curb and put the development of the disease under control.

To take the above-mentioned remarks into consideration involves that Article 15 of the draft Regulation amending Commission Regulation (EC) No 70/2001 must be rewritten. It seems to us that this enlarged view of the problem at the level of agricultural holdings was overlooked during the reflections conducted on 17th March 2006.

The table below is provided to better understand the economic impact of on-farm fallen stock in the EU-25. Please note that the figures are calculated by extrapolation, starting from the production data in one Member State. So they are given as an indication only.

Animal species	Total weight of the cadavers (ton)	Costs (M €)
Swine	1 103 980	319
Bovine	1 142 465	330
Ovine	274 863	79

2- Prevention, monitoring, surveillance, control, eradication of animal diseases and cost-sharing

The Commission should, with respect to each disease likely to cause an epizootic, lay down the preventive health measures that:

- the European Union,
- Member States,
- food business operators, in particular agricultural holdings,

have to put in place.

Such thought should give rise to specifications that would be made compulsory after a trial period. The cost-sharing scheme for agricultural holdings might be implemented under the Rural Development measures.

This proposal can be illustrated by the provisions set forth in the Hygiene Package with regard to Trichinosis: Trichinosis control is based upon specifications that farmers have to apply {Annex IV to Regulation (EC) No 2075/2005}. This would have the merit of making the involvement of farmers in the scheme concrete and making their individual responsibility objective.

Although a common European system exists for financing monitoring, surveillance, control and eradication programmes for certain animal diseases, several different systems are in place at Member States level. Operators are therefore subject to different costs depending on the Member State where they operate and this leads to competition problems among them, which should not take place in the European Union. UECEV therefore supports the need for harmonization of the systems in place in the different Member States as regards the co-financing of such programmes by the Community and by the national authorities.

Responsibilities for costs caused by outbreaks of animal diseases should be also shared among business operators and public authorities depending on the characteristics of the disease and the outbreak itself. However, it has also to be considered that in several cases diseases spread independently from the biosecurity measures adopted and even in case of high standards. In such cases, business operators should have full compensation from public authorities for the consequences of animal diseases.

A grading system to classify diseases and to define the cost-sharing between authorities (EU and Member States) and food business operators should be studied and applied in a harmonised way throughout EU.

3- Financing of indirect costs induced by epizootics

The recent epizootics have shown that Member States and the European Union nearly always released the money necessary for financing direct costs but this has seldom been the case when it comes to indirect costs.

Unless the only ambition is to move part of the direct costs on to farmers, it seems to us that the grand challenge to take up relates to the financing of indirect costs induced by epizootics.

Yet the presentation made on 17th March 2006 makes believe that the solutions that are being contemplated concentrate quasi exclusively on direct costs.

We take the stand that the introduction of a new cost-sharing scheme would only be justifiable if the European Union is willing to seek a solution to the financing of indirect costs.

If a contribution from the industry and traders to the financing of direct costs induced by epizootics cannot be conceivable, then the question as to indirect costs remains open since the industry and traders are very interested in seeing this risk covered because they are fully concerned.

It goes without saying that the precondition to any contribution is that such contribution leads to an automatic consideration of the prejudice that the industry and traders suffer in the event of an epizootic.

In this case, it would be necessary to deepen and reorientate the solutions that are being proposed (option E for instance).

In such view, the grading system referred to in the foregoing paragraph should specify, for each disease, what the direct and indirect costs induced by the different animal diseases are, establishing in a similar way the level of cost sharing among public authorities and the different food business operators.

In order to clearly define the responsibilities and to maximise the efforts of all the different parties involved, and in order to allow reaching the expected benefits of such approach, such grading system should be negotiated together by European authorities, national authorities and food business operators.

At this stage we want to limit our remarks to the three above-mentioned points since we are aware that they largely question the analysis and the conclusions that were made on 17th March 2006.

We are open to a *viva voce* discussion with you if you deem it useful.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'J. Mériaux', with a long, sweeping underline.

Jean-Luc Mériaux
UECBV Secretary General

Paper

Re: Cost-sharing schemes

Writer: W.E. Geluk

Date: 5-4-2006

Introduction and aim

At the EU workshop of 17 June 2005 in Brussels, options were discussed for cost-sharing schemes for epidemic livestock diseases. This paper sets out our response to the working paper resulting from the workshop. In addition to a general section, separate sections are devoted to each working paper section.

General

The control of epidemic or zoonotic livestock diseases is a critical process. The funding of the measures is just one aspect of this process and has to be seen in the context of the implementation of the measures involved and the availability of legal instruments. Disease control is effective only if an adequately equipped control organisation is in place, which has the legal authority to enforce certain measures.

In other words, the choice of a specific financial model to fund the disease control measures cannot be divorced from the choice of implementation and the legal instruments available. The use of funding, specific measures and legal instruments should thus be seen as a coherent whole.

Working Paper

1. Introduction

No comment.

2. Criteria for harmonised cost-sharing schemes

V Compatibility with EU financial instruments and ongoing initiatives.

The introduction of cross-compliance is subject to change and may influence the effectiveness of prevention, monitoring and control of animal diseases. As our primary aim is to put an effective disease control system in place, as well as a viable, harmonised system of cost-sharing schemes, it is perhaps not a good idea to include cross-compliance as one of the criteria.

3. Main alternatives for cost-sharing schemes

The Netherlands agrees with the four main alternatives for financing prevention, detection and control and with the conclusion that a harmonised Community framework for national or regional cost-sharing schemes is in fact the only viable option.

4. Harmonised Community framework for national or regional cost-sharing schemes.

4.1. Categorisation of animal diseases

For the effect of prevention on the costs of animal disease control, see point 4.2 under incentives.

The Netherlands welcomes the categorisation of animal diseases on the basis of specific criteria. This allows the diseases to be categorised in a number of homogeneous groups.

However, the external effects criterion, such as economic effects and public health impacts, would seem too limited. One other criterion for categorisation might be whether or not effective control by the farmer is possible.

There should be a separate category for those diseases, which the farmer cannot effectively control or prevent from spreading from his farm, to distinguish them from the diseases that he can control or contain.

We also believe that the DHL, DLE and DNE categorisation is too broad and further categorisation is necessary, perhaps a categorisation based on scientific insights might help here.

Relating the manner of funding to the extent of public involvement in a cost-sharing scheme is a good idea. Where animal diseases require only limited public involvement this could be reflected in implementation, funding and regulation (see also the introduction).

The categorisation of animal diseases should take place on the basis of EU harmonised criteria.

4.2. Incentive compatibility

Section 4.1.1. refers to the difference between efficient and legal animal health standards. It states that when efficiency standards are lower than legal standards, this has no effect on prevailing standards because legal standards have to be met. However, if it is the other way round, the implementation of the more efficient standard should be a prerequisite of the cost-sharing scheme.

It should however be noted that when efficiency standards are lower than legal standards the support for the legal standard would be undermined and become untenable as time goes on.

As for the example put forward here, it should be noted that prevention is essential. The costs of a large-scale outbreak are so high that investing in prevention is profitable and makes sense. Prevention is more than just having regular health checks of farm animals. A farm may be infected at any time: infection may also occur right after a check and would then go unnoticed. Only if such checks are carried out very frequently would they reduce the risk of an outbreak and affect the costs of control. But such frequent checks are also expensive and would bring prevention costs to unacceptably high levels.

It is always a good thing to improve prevention where possible. But one should always keep an eye on the costs and benefits.

Punt 4.2.6. refers to the link between farmers' contributions to a cost-sharing scheme and individual risks. Livestock density is taken as an example of a risk-relevant factor. Linking a farmer's contributions to a cost-sharing scheme and the measures taken by farmers to decrease their individual risk is a good thing, but it must be feasible and have no negative side-effects. It is important to consider whether the farmer in question is in a position to take such measures. Making the distinction between areas of high livestock density and low livestock density is perhaps not the best example. It would seem more appropriate to make a distinction between farmers requiring a written guarantees from their suppliers (regarding the quality, health, provenance of their products /animals) and those who do not.

Section 4.2.7 refers to a deductible. This might be considered if all other loss is compensated or for diseases that do not come under the category DHE.

Section 4.2.9 refers to consequential losses. Such losses include those directly related to regulatory measures (such as movement restrictions). The scope of EU measures for market support could be broadened to complement the compensation payments for consequential losses from the cost-sharing scheme.

To prevent trade distortion, the price data used in assessing direct losses and consequential losses, should be similar to those in non-affected areas.

4.2.12. states that losses of animal value should be indemnified according to replacement values. Replacement values generally coincide with market values. In the absence of market values, the replacement value is assessed by taking the purchase price of the animal/object plus the investment costs made up to the point that compensation is granted for its loss. A correct application of this principle will not lead to farmers intentionally infecting healthy animals for financial gain.

4.3. Balancing costs and responsibilities etc.

The options given should be considered in the context of the nature of the disease, or rather the nature of homogenous groups of diseases.

4.4. Flexibility of implementation at the national or regional level

Here too, the options given should be considered in the context of the nature of the disease or rather the nature of homogenous groups of diseases. Each group of homogenous diseases should be fitted to the best option.

Further remarks

Public Fund

Should be available for homogenous groups of diseases with high externalities, zoonotic diseases or diseases that cannot effectively be controlled by the farmer. The fund should be administrated through a public authority using legal instruments. The government's contribution to the fund should be substantial.

Mutual Fund

A mutual fund is not suitable in outbreaks where compulsory participation of all farmers in the control regime is required.

Insurers

Insurers will generally impose premiums that are profitable, cover their own risk and contribute to an insurance buffer. Farmers will have to pay a premium depending on the risk they pose to insurance companies. This aspect may play a role in the choice of the scheme.

Public insurer

If the government provided the bridging finance, premiums could stay modest when control costs following an outbreak are soaring.

Competitive insurance market and private insurers pool

Premiums can soar, as private insurers would want to protect themselves from the risk of an outbreak with high control costs. Private insurers might want to reduce their risk and make demands that could have an adverse effect on prevention, monitoring or control.

This does not seem suitable for the homogenous group of high-risk diseases or diseases with high externalities where compulsory participation of all farmers in the control regime is

required.

**Stellungnahme des GDV
zum Arbeitspapier und zur Diskussion des Experten-Workshops
der Europäischen Kommission am 17.03.2006 in Brüssel zum Thema
„Optionen harmonisierter Kostenteilungs-Systeme für Tierseuchen“**

Die deutschen Landwirtschaftsversicherer begrüßen die EU-Kommissions-Initiative zum Experten-Workshop und den Willen zur breiten Einbeziehung aller betroffenen Seiten, um gemeinsam die Tierseuchenprävention und die Bewältigung der finanziellen Folgen von ansteckenden Tierkrankheiten auf europäischer Ebene.

Das der Diskussion zugrunde gelegte Arbeitspapier erwähnt im Einleitungstext einen Bezug zur EU-Initiative „Krisenbewältigung in der Landwirtschaft“. Die Einordnung des Projektes in den Gesamtkontext der Gemeinsamen Agrarpolitik (GAP) wird jedoch bisher nicht klar sichtbar.

In der am 16.02.2006 vom Europäischen Parlament angenommenen Entschließung zum Risiko- und Krisenmanagement im Agrarsektor wird die private Versicherung als 1. Lösungsoption genannt. „Angesichts der Vielfalt der Versicherungsinstrumente ist sie ein besonders wichtiges Instrument für das Risiko- und Krisenmanagement, das sich durch ihre häufige Anwendung bewährt hat und daher ausgereift ist.“ Im Kontext des Workshop-Arbeitspapiers findet sich allerdings die Frage nach der Rolle und Rangstellung der Privatassekuranz derzeit noch nicht adäquat wieder.

Die besagte Parlamentsentschließung beinhaltet im Übrigen noch zwei weitere Lösungsansätze, die gerade auch für die Folgekosten-Versicherung entscheidend sein werden bei flächendeckenden Angeboten durch die Privatassekuranz. Das ist zum Einen die EU-Bezuschussung der Versicherungsbeiträge für die Landwirte und zum anderen der Aufbau von zusätzlichen, ggf. staatlichen Rückversicherungsmöglichkeiten. Bei entsprechendem politischen Willen zur Umsetzung dieser beiden Prämissen könnte bereits heute schon ein umfassendes Mehrgefahrenversicherungssystem aufgebaut werden. Gemeinsam mit der Bauernschaft entwickelte Konzepte für flächendeckende landwirtschaftliche Mehrgefahrenversicherungen unter Einbeziehung der finanziellen Kapazitäten der privaten Versicherungswirtschaft liegen nämlich sowohl für die Tier- als auch die Pflanzenproduktion schon einigen Jahren vor. Auf europäischer Ebene bestehen dazu zahlreiche Kontakte zwischen dem Europäischen Versicherungsverband CEA, der Europäischen Kommission und dem Parlament sowie der Landwirtschaft und der Politik. Leider stellt das Arbeitspapier diese Tatsachen nicht dar.

Das Arbeitspapier vermeidet ebenso bisher den Ausblick auf eine mögliche Gesamtlösung am Ende der Studie. Dabei liegt doch recht offensichtlich ein mehrstufiges, durch einander ergänzende Finanzierungs- und Organisationsformen gekennzeichnetes System als geeigneter Ergebnisvorschlag auf der Hand. Die Versicherungswirtschaft tritt für eine subsidiäre Lösung ein. Auf nationaler Ebene sind die Belange aller Betroffenen zu berücksichtigen, soweit sie auch jetzt schon zur Risikominimierung und zur Schadensbewältigung beitragen. Die Kommissionsstudie sollte also nur die gesetzlichen und finanziellen Rahmenbedingungen für Tierseuchenprävention und -bewältigung festlegen. Die Umsetzung hat nur Aussicht auf Erfolg, wenn die konkrete organisatorische Ausgestaltung der nationalen Ebene überlassen bleibt.

Gerade in Deutschland ergänzen sich aus Sicht des GDV die beiden „Stufen“ Tierseuchenkassen (gemeiner Tierwert) und privates Versicherungsangebot (Ertrags-

schaden/Folgekosten) in sinnvoller Weise, wie es derzeit in der EU kaum ein anderes Modell ermöglicht. Wie die Beispiele der jüngsten Vergangenheit zeigten, liegt der Hauptteil des Schadens für den Landwirte eben genau im Ertragsausfall, also in den Folgekosten nach der Tiertötung oder erst recht bei Einrichtung von Sperrgebieten, wenn eine Vermarktung der ansonsten gesunden Tiere nicht mehr möglich ist. Auf diesen Ertragsausfall gingen jedoch fast alle der Expertenpräsentationen auf dem Workshop überhaupt nicht ein, weil es eben hierfür so gut wie keine Angebote gibt (Ausnahmebeispiel Deutschland). Deshalb sollte in den weiteren Arbeitsschritten der EU-Studie nicht nur die Präzisierung der zu erfassenden Kosten- und Folgekostenarten vorgenommen werden, sondern auch ganz konkret die Frage nach der Deckung des Ertragsausfalles gestellt werden.

Die deutschen Versicherer unterstützen ferner den Ansatz, bei einer harmonisierten Neuregelung im europäischen Tierseuchenbereich jegliche Art von Wettbewerbsverzerrungen bei der EU-Kofinanzierung auszuschließen. Wie überall muss es auch für Subventionen in diesem Bereich Transparenz und klare Vergaberichtlinien geben, unabhängig von der nationalen Ausgestaltung des Systems.

Das im Arbeitspapier als Anreize-System bezeichnete und als finanzieller Selbstbehalt definierte Bestreben, den Tierhalter einen seiner Verantwortung angemessenen Eigenbeitrag leisten zu lassen, ist unverzichtbar und aufrecht zu erhalten. Nur so kann ein finanzierbares Gesamtsystem aufgebaut und gleichzeitig das Eigeninteresse des Landwirts an einer effektiven Tierhygiene gestützt werden. Das dieses Verständnis über notwendige Anreize erst unzureichend entwickelt ist, liegt vorrangig an der bisher viel zu geringen Einbeziehung der Landwirte und deren Interessenverbände. Hier besteht akuter Nachholbedarf für das mit der Studie beauftragte Consultingunternehmen. Es stellt sich aber auch nicht zuletzt für die Versicherungswirtschaft die Aufgabe, mit den Bauernverbänden sowohl auf nationaler als auch auf europäischer Ebene einen verstärkten Dialog zu suchen. Ohne die Tierhalter wird keine politisch-soziale Akzeptanz zum Vorhaben herstellbar sein.

Noch unklare Aussagen bestehen im Arbeitspapier dahingehend, welche Kosten- und Folgekostenarten überhaupt von einem harmonisierten System der Kofinanzierung und der Kostenteilung erfasst werden sollen. Die bisherigen „Insel-Lösungen“ in Europa decken fast alle nur den gemeinen Tierwert, die Kosten aus Tod, Zwangstötung und Tierkörperbeseitigung. Ertragsausfallentschädigungen (wie in Deutschland auf freiwilliger, privater Basis) sind die absolute Ausnahme. Die sehr vorteilhafte Verknüpfung von Entschädigung mit Aufgaben der Tierhygiene und Seuchenprävention in Gestalt der deutschen Tierseuchenkassen gibt es woanders gar nicht.

Folgekosten von Tierseuchenzügen können sehr weit reichen, z.B. bis in die verarbeitende Industrie, Handel und Gastronomie. Bei fehlender Abgrenzung könnte ein Entschädigungssystem sehr bald unbezahlbar werden. Zu klären bleibt die Frage an die EU-Kommission, was ein flächendeckendes und umfassendes Vorsorge- und Entschädigungssystem überhaupt kosten darf. Die verfügbaren finanziellen Kapazitäten der im Optionskatalog aufgezählten Instrumente bzw. Organisationsformen sind bekanntlich begrenzt bzw. ausgeschöpft. Ohne die Frage nach der generellen Finanzierbarkeit hinterlässt der bisherige Ansatz zur Studie den Eindruck eines akademischen, von der Praxis relativ fernen Herangehens.



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Tiergesundheitsstrategie 2007 – 2013;

hier: Finanzierung von Tierseuchenausbrüchen („Cost-sharing-Schemes“)

Sehr geehrter Herr Dr. Alleweldt,

zu dem in der Veranstaltung am 17. März 2006 vorgestellten Papier waren die Mitgliedstaaten aufgefordert, insbesondere zu den unter Nr. 5 aufgeworfenen Fragen Stellung zu nehmen. Dem würde ich gerne nachkommen und nehme wie folgt Stellung:

1. Sind Sie mit den in Abschnitt 2 aufgeführten Kriterien für die harmonisierten Kostenteilungssysteme einverstanden? Begründen Sie Ihre Aussagen.

Den Kriterien I bis VI im Abschnitt 2 des Arbeitspapiers kann zugestimmt werden. Außerdem sollten die von Frankreich am 17.03.2006 vorgeschlagenen Kriterien kollektive Verantwortung, Schnelligkeit und Effizienz sowie das Subsidiaritätsprinzip mit aufgenommen werden.

Bei dem Kriterium II, Kompatibilität der Anreize sollte folgende Ergänzung eingefügt werden: Anreizsysteme müssen so flexibel gestaltet werden, dass es möglich ist, situationsbezogen bestimmte Anreize befristet vorzugeben. Die verschiedenen Differenzierungsmöglichkeiten für ein Anreizsystem sollten die Bereiche der Tierhaltung und Seuchenprävention einbeziehen. Anreizsysteme selbst müssen fortlaufend daraufhin überprüft werden, ob sie veränderten Produktionsbedingungen oder rechtlichen Vorgaben noch gerecht werden. Anreizsysteme müssen mit vertretbarem administrativem Aufwand umgesetzt werden können und müssen ferner zwingend eine Gleichbehandlung der Tierbesitzer sicherstellen.

2. **Sind Sie mit den in Abschnitt 4 des Dokumentes aufgeführten vorgeschlagenen Nummern 1 bis 15 für harmonisierte Kostenteilungssysteme einverstanden? Begründen Sie Ihre Aussagen und strukturieren Sie Ihre Kommentare nach der Nummer der Rede/Option.**

Nummer 1

In allen Bereichen, in denen gesetzliche Standards hohe seuchenhygienische Anforderungen (die auch präventive Maßnahmen enthalten)vorschreiben, sollte es für ein Kostenteilungssystem ausreichen, wenn die gesetzlichen Vorgaben erfüllt werden.

In allen Bereichen, in denen noch keine gesetzlichen Standards bestehen, können wirksame Standards eine Vorbereitung für gesetzliche Standards sein; ein Beispiel wäre die BHV1- oder die BVD-Bekämpfung. Bei beiden Tierseuchen wurden bereits vor Einführung einer staatlichen Bekämpfung seuchenhygienische Anforderungen z. T. regionenbezogen festgelegt.

Nach erfolgreich abgeschlossener Sanierung (Beispiel: Aujeszky'sche Krankheit) sind Monitoring-Untersuchungen zur Überwachung des Status unverzichtbar.

Nummer 2

Nummer 2 kann zugestimmt werden. Hierzu wird vorgeschlagen, um überhaupt erst einmal zu einer Harmonisierung in der Gemeinschaft zu kommen und auch um Wettbewerbsverzerrungen abzubauen, eine Beteiligung der Tierbesitzer an den Kosten der Bekämpfung von DHE-Krankheiten (anzeigepflichtige Tierseuchen) in Höhe von 25 % vorzugeben.

Nummer 3

Für Krankheiten mit geringen externen Auswirkungen sollte die Beteiligung an einem Kostenteilungssystem freiwillig sein und/oder DLE-Krankheiten können den privaten Versicherungsmärkten überlassen bleiben.

Nummer 4

Krankheiten nach DNE sollten ausschließlich privaten Versicherungsmärkten überlassen werden.

Nummer 5

Die Klassifizierung von DHE-Krankheiten sollte von jedem Kostenteilungssystem nach harmonisierten Kriterien vorgenommen werden (Option b).

Nummer 6

Dem Vorschlag, dass Beiträge der Tierbesitzer dem individuellen Risiko Rechnung tragen müssen, kann nicht zugestimmt werden. Hierzu wird auf die mit dem 30 %igen Hygienebonus in Niedersachsen gemachten Erfahrungen (s. Schreiben der Niedersächsischen Tierseuchenkasse vom 21.03.2006) verwiesen. Stattdessen sollte ein Kostenteilungssystem die Möglichkeit haben, Beiträgen unter Berücksichtigung erbrachter Leistungen differenzieren zu können.

Nummer 7

Eine Selbstbeteiligung der Tierbesitzer an den direkten Schäden wird abgelehnt. Da nach deutschem Recht nur die Tierbesitzer die 100 %ige Entschädigung inklusive Tötungs- und Verwertungskosten erhalten, die die seuchenhygienischen Vorgaben sowie ihre Melde- und Beitragspflicht erfüllt haben, sind mit §§ 69/70 Tierseuchengesetz (TierSG) genügend Sanktionsmöglichkeiten gegeben, nicht korrektes Verhalten der Tierbesitzer zu maßregeln. Ein zusätzlicher Selbstbehalt könnte zudem die Motivation der Tierbesitzer an einer konstruktiven Mitarbeit behindern, wenn der „Anreiz“, eine 100 %ige Entschädigung zu erhalten, nicht mehr gegeben wäre.

Nummer 8

Diesem Punkt kann zugestimmt werden und ist so auch bereits in Deutschland durch § 67 Abs. 3 Nr. 1 TierSG gesetzlich vorgegeben. Insoweit kann hier Option a zu Punkt 8 zugestimmt werden.

Nummer 9

Ein Kostenteilungssystem sollte die direkten Verluste der auf amtliche Anordnung getöteten Tiere, deren Tötungs- und Verwertungskosten abdecken. Zusätzlich sollten Kosten für Reinigung und Desinfektion übernommen werden (können). Alle übrigen Kosten aus dem Bereich Ertrags- und Folgeschäden sollten durch private Versicherungsangebote abgedeckt werden. Dies auch deshalb, weil die einzelbetriebliche Situation sehr unterschiedlich ist (Betriebe, die absehbar mit der Tierhaltung aufhören werden, Betriebe, die investiert haben und zwangsläufig einen höheren Fremdkapitalanteil haben). Je nach Betriebssituation ist es sinnvoll oder auch nicht, eine Ertrags- und Folgeschadenversicherung abzuschließen.

Diese sehr individuelle wirtschaftliche Situation kann ein Kostenteilungssystem nicht einschätzen und beurteilen.

Die Gefahr einer „bewussten Infizierung“ eines Bestandes kann zwar nie ganz ausgeschlossen werden, wird jedoch für äußerst unwahrscheinlich erachtet. Das kann sie im Übrigen mit keinem System. Die heute gegebene Verfolgbarkeit von Tierbewegungen sowie die bei jedem Seuchenausbruch stattfindende epidemiologische Verfolgung erhöhen die Gefahr, dass eine „bewusste Infizierung“ nachgewiesen wird. Die zwangsläufige Folge davon ist, dass der Anspruch auf Entschädigung des gemeinen

Wertes, der Tötungs- und Verwertungskosten zu 100 % entfällt. Die in §§ 69/70 TierSG gesetzlich vorgegebene Sanktionen stellen eine wirksame Abschreckung für „bewusste Infizierungen“ dar.

Nummer 10

Kosten für Notimpfungen sind wegen der Nicht-Impf-Politik bei den letzten Seuchenausbrüchen in Deutschland nicht entstanden.

In den Jahren vor dem gemeinsamen Binnenmarkt wurden die Kosten der Impfung von den Kostenteilungssystemen übernommen. Wenn unter „regulatorischen Maßnahmen“ ausnahmslos Impfungen gemeint sind, kann bei Punkt 10 mit Option a zugestimmt werden.

Sollten „regulatorische Maßnahmen“ z. B. auch Marktentlastungsmaßnahmen beinhalten, müsste eine neue Option c eingefügt werden, nämlich ein klares Nein.

Nummer 11

Diesem Punkt kann zugestimmt werden.

Nummer 12

Hier wird eine Änderung vorgeschlagen. Grundlage des gemeinen Wertes ist der Markt- oder Verkehrswert. Zur Ermittlung des gemeinen Wertes werden die zum Zeitpunkt des Schadensfalles geltenden amtlichen Marktnotierungen herangezogen. Sollte es keine Marktnotierung geben und die KOM hat Marktentlastungsmaßnahmen mit bestimmten Preisvorgaben beschlossen, gelten für die Ermittlung des gemeinen Wertes die Preise der Entlastungsmaßnahmen. Ein Wiederbeschaffungswert ist deshalb problematisch, weil nicht nur marktfähige Tiere von einer Tötungsanordnung betroffen sind. Für diese Tiere gibt es keinen Wiederbeschaffungswert. Von daher geht das System der Schätzung von dem Marktwert der Tiere zum Zeitpunkt der Einstallung und dem Schlachtwert zum Zeitpunkt der Ausstallung aus. Der Wert der Tiere, die sich in unterschiedlichen Produktionsstadien dazwischen befinden, wird durch eine aus fachlichen Gründen modifizierte Interpolation der beiden Eckwerte ermittelt. Der Begriff „Wiederbeschaffungswert“ spielt daher in den heutigen auch unter Berücksichtigung betriebswirtschaftlicher Kriterien erarbeiteten Schätzrichtlinie keine Rolle mehr und sollte daher auch keine Berücksichtigung finden.

Nummer 13

Eine Entschädigung von Pauschalsätzen für schwer quantifizierbare Produktionsverluste erscheint sinnvoll, gleichwohl bestünde die Möglichkeit, dies privaten Versicherungen zu überlassen. Praktische Erfahrungen damit bestehen in Deutschland nicht.

Nummer 14

Diesem Punkt kann zugestimmt werden . Unter Hinweis auf Nummer 2 wird vorgeschlagen, auch für das zukünftige Kostenteilungssystem in der EU eine 25 %ige Beteiligung der Tierbesitzer an den direkten Kosten von Seuchenbekämpfungsmaßnahmen vorzusehen. Zudem ist zu berücksichtigen, dass sich die Gemeinschaft nur an den Kosten beteiligt, die der öffentlichen Hand entstanden sind. Wird die Entschädigung zu 100 % aus Staatsmitteln bezahlt, ist die Kofinanzierung seitens der Gemeinschaft insoweit entsprechend höher, als wenn ein Teil der Entschädigung vom Sektor selber getragen wird. Hier müssen die Systeme, auch um Wettbewerbsverzerrungen zu vermeiden, angeglichen werden.

Nummer 15

Der Grad der öffentlichen finanziellen Unterstützung für Kostenteilungssysteme sollte dem aktuellen Verfahren ähnlich sein, d. h. es sollten feste Prozentsätze bei Tierverlusten für bestimmte Krankheiten im Fall es Seuchenausbruches finanziert werden (Option a).

3. Sehen Sie spezifische Vorteile/Nachteile in einer der institutionellen Formen für ein in Nr. 16 und im Anhang aufgeführtes Kostenteilungssystem? Ziehen Sie eine andere institutionelle Form vor?

Als Lösungsmöglichkeit für ein Kostenteilungssystem wird in erster Linie die Option A1 - Public Fonds - angesehen, wobei die Mittel von einem Kostenteilungssystem (in DE die Tierseuchenkassen) verwaltet werden. Die Voraussetzungen der Option A1 werden durch das in Deutschland praktizierte System bereits erfüllt (Zusammenwirken der Tierseuchenkassen und der staatlichen Tierseuchenbekämpfung). Auf die gesetzlich vorgegebenen Differenzierungsmöglichkeiten bei der Beitragserhebung gemäß § 71 TierSG sowie damit bereits gemachte praktische Erfahrungen hat die Niedersächsische Tierseuchenkasse mit Schreiben vom 21.03.2006 bereits hingewiesen. Die Optionen B und C sollten daher aus Sicht Deutschlands als Lösungsmöglichkeit nicht in Erwägung gezogen werden.

4. Sollten nur Bauern in ein obligatorisches Kostenteilungssystem einzahlen müssen, oder sollten verwandte Nahrungsmittelbranchen ebenfalls einzahlen?

In Deutschland gibt es auch Erfahrungen mit der Beitragserhebung beim Viehhandel. Grund dafür ist, dass der Viehhandel in der Vergangenheit wiederholt bei Seuchenausbrüchen beteiligt war. Eine Beitragserhebung beim Viehhandel führt zum Teil dazu, dass der Viehhandel diese Kosten an den Tierbesitzer weitergibt. Diskussionen mit der Schlachtbranche über eine Beteiligung der Schlachtseite an den Beseitigungskosten von Rampentieren ergaben bisher eine klare Ablehnung und eine ebenso klare Aussage, dass diese Kosten dann an den Tierbesitzer weitergegeben werden. Eine Beteiligung der nachgelagerten Wirtschaft an den Kosten der direkten Verluste wird daher zu einer Weitergabe dieser Kosten an die Tierbesitzer führen. Eine Überwachungsmöglichkeit, die die Weitergabe der Kosten wirksam verhindert, besteht nicht. Sie müsste zusätzlich geschaffen werden und würde Kosten verursachen, die bisher nicht entstanden sind. Das Ziel einer wirksamen Kosteneinbindung der nachgelagerten Wirtschaft kann ohne zusätzlichen Aufwand nicht erreicht werden und sollte daher unterbleiben.

Mit freundlichen Grüßen

Im Auftrag

Dr. Bätza

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Hannover, den

21.03.2006

Sehr geehrter Herr Dr. Alleweldt,
Sehr geehrter Herr Dr. Breustedt,

zunächst danke ich dafür, dass ich die Möglichkeit erhielt, an dem Workshop in Brüssel teilnehmen zu können. Es war wirklich ein Expertengespräch und soweit ich es beurteilen kann, eine offene und sachliche Diskussion. Gut finde ich, dass wir die in Deutschland gemachten Erfahrungen im Vorfeld einer EU-Entscheidung einbringen können.

Das will ich auch mit diesem Schreiben tun, indem ich Ihnen die gesetzlich verankerten Differenzierungsmöglichkeiten bei der Beitragserhebung aufzeigen und kurz auch auf die mit einzelnen Vorgaben in der Praxis gemachten Erfahrungen eingehen möchte. Diese Stellungnahme erfolgt unabhängig von der offiziellen Stellungnahme Deutschlands zu den Optionen Ihres Arbeitspapiers. Die offizielle Stellungnahme wird durch BMELV, Herr Dr. Bätza erfolgen.

Mein Schreiben wird sich ausschließlich auf den Bereich Anreize durch Beitragsdifferenzierung beziehen.

§ 71 Tierseuchengesetz enthält klare Vorgaben zur Beitragserhebung (auszugsweise Gesetzeskopie wird als Anlage 1 beigefügt). Danach wird vorgegeben, von welchen Tierarten Beiträge zu erheben sind und von welchen Tierarten Beiträge erhoben werden können. Diese

...

Differenzierung hat zum einen zum Ziel, eine Gleichbehandlung bei wirtschaftlich bedeutenden Tierarten zu erreichen, zum anderen aber Spielraum für die Länder bei weniger bedeutenden Tierarten zu eröffnen. Unabhängig davon kann sich die wirtschaftliche Bedeutung einer Tierart gravierend ändern. Als Beispiel sei hier das Geflügel genannt, was im TierSG auch noch unter die Kann-Beitragsvorschriften fällt. Das ist historisch bedingt, da Geflügel früher keine wirtschaftlich bedeutende Tierart war. Das ist aber auch damit zu erklären, dass im Geflügelbereich sehr stark mit Integrationen gearbeitet wird. Zum Selbstverständnis der Integrationen gehörte es über Jahrzehnte, die Dinge in den eigenen Reihen zu regeln. Dieses Vorgehen wurde begünstigt durch die Tatsache, dass es über Jahrzehnte keine seuchenbedingten Verluste im Geflügelbereich gab. Das änderte sich schlagartig 1999 mit dem Auftreten der Geflügelpest in Italien und erfuhr eine weitere Brisanz durch den Ausbruch von Geflügelpest 2003 in den Niederlanden. Die aktuelle Situation ist bekannt. Klar ist heute auch, dass die Gefahr der Geflügelpest Europa und die Mitgliedsstaaten die nächste überschaubare Zeit beschäftigen wird und damit die Tiergesundheitsstrategie 2007 - 2013 für diesen Bereich von großer Bedeutung sein werden. Die Auswirkungen dieser Geflügel-Vergangenheit zeigen sich bei den Tierseuchenkassen darin, dass alle Kassen in Deutschland zum gegenwärtigen Zeitpunkt eine zu niedrige Rücklage beim Geflügel haben.

Zur Beitragserhebung nach § 71 TierSG

1.) Beitragsstaffelung nach Tierart

Die Beitragserhebung getrennt nach Tierarten vorzunehmen, ist Praxis in allen Tierseuchenkassen.

2.) Beitragsstaffelung nach Alter der Tiere

In Niedersachsen gab es von 1990 - 1996 eine Beitragsstaffelung nach Alter. Grund dafür war, dass es damals gesetzlich noch keine Staffelungsmöglichkeit nach Nutzungsart gab (diese Möglichkeit wurde erst 1995 mit in § 71 aufgenommen). Grund für die Beitragsdifferenzierung nach Alter war die Tatsache, dass es in der Kälbermast hohe Verluste infolge von Salmonellose gab. Die Auswertung der Beitrags- und Leistungsdaten für den Rinderbereich in Niedersachsen ergab, dass die Kälbermast höhere Kosten verursachte als die übrigen Rinderhalter. Für einen Zeitraum von sechs Jahren wurde daher im Rinderbereich zwischen Rinderhaltung und Kälbermast unterschieden. Diese Beitragsdifferenzierung trug mit dazu bei, dass sich die organisierte Kälbermast um die Lösung des Salmonellose-Problems bemühte. Die Überprüfung der Beitrags- und Leistungsdaten führte 1996 zu dem Ergebnis, dass diese Differenzierung nicht mehr gerechtfertigt war. Sie wurde daher mit der Beitragsatzung für 1997 aufgehoben.

3.) Beitragsdifferenzierung nach Größe der Bestände

Eine Beitragsstaffelung nach Größe der Bestände gab es bei verschiedenen Tierseuchenkassen. In Niedersachsen bestand sie in der Zeit von 1983 - 1996 im Rinderbereich und von 1983 - 2002 im Schweinebereich sowie von 1990 - 2002 im Geflügelbereich.

Grund dafür war, dass die größeren Bestände die Tierseuchenkasse bei freiwilligen Leistungen öfter in Anspruch nahmen.

Unabhängig von der Beitragsstaffelung führten v. a. steuerliche Vorgaben in den 90er Jahren in Deutschland zu Betriebsaufteilungen. Das schlug sich dann sekundär auch in der Beitragsstaffelung der Tierseuchenkasse nieder, in dem z. B. der 3.000 Schweinemastbestand, aufgeteilt in sechs Betriebe à 500 Mastschweine gemeldet wurde und damit automatisch nicht mehr in die Größenprogression der Beiträge bei über 1.000 Schweinen kam. Die Tierseuchenkasse ist dieser Praxis begegnet, in dem ab 1998 die seuchenhygienische Einheit für die Beitragserhebung und die Größenstaffel relevant wurde. Die Definition der seuchenhygienischen Einheit wurde in die Beitragssatzung aufgenommen (Kopie in der Anlage 2). Grundlage dafür waren u. a. wissenschaftliche Auswertungen des Schweinepest (KSP)-geschehens von 1993 - 1997. Danach konnte festgestellt werden, dass das Risiko für einen Bestand, mit KSP infiziert zu werden, bei einer Entfernung der Ställe im Abstand von mehr als 500 Metern zueinander den Faktor 1 erreicht. D. h. das Risiko, eine Seucheneinschleppung zu haben, war im Abstand von über 500 Metern so groß, wie für jeden anderen Betrieb. Lagen die Betriebe oder Stallbereiche weniger als 500 Meter auseinander, stieg der Faktor für das Risiko eines Seuchenausbruches über 1. Die seuchenhygienische Einheit verschiedener Betriebe/Stallbereiche für die Tierart Schwein bei der Beitragserhebung war solange ein wichtiges Thema, solange die Beiträge für Schweine relativ hoch lagen. Nach Abschluss der Aujeszky-Sanierung 2000/2001 und aufgrund der seitdem seuchenfreien Zeit sind die Beiträge für Schweine in Niedersachsen niedrig, die Staffelung nach Größe war nicht mehr zu begründen und die seuchenhygienische Einheit für die Beitragshöhe praktisch kein Thema.

4.) Staffelung nach dem individuellen seuchenhygienischen Risiko eines Betriebes

Unter dem Eindruck der KSP-Bekämpfung ab 1993, der ersten Seuchenbekämpfung nach Einführung des gemeinsamen Binnenmarktes kam es infolge der Nicht-Impf-Politik und des Stamping out zu finanziellen Dimensionen, wie es sie in früheren Seuchenzeiten nicht gegeben hatte. Es entstand die Idee, zukünftig das seuchenhygienische Risiko des Einzelbetriebes mit einzubeziehen. Das war auf den ersten Blick einleuchtend und erschien folgerichtig. Insofern wurde es sowohl von Politik als auch von Presse gern aufgegriffen mit der Folge, dass es 1995 in § 71 TierSG mit aufgenommen wurde. In Niedersachsen hatte es dann bereits für die Beitragserhebung 1996 eine entsprechende Differenzierung gegeben. Damit galt für 1996 ein 10 % Beitragsbonus für Betriebe, die als KSP unverdächtig anerkannt worden waren. Ab 1997 wurde die Differenzierung auf 30 % erhöht und schloss außerdem die Erfüllung von Bedingungen der Nds. HygieneRL für Schweinehaltende Betriebe mit ein. Die Überwachung und Kontrolle der Einhaltung dieser Bedingungen oblag den örtlichen Veterinärämtern, die sich dazu der Fachtierärzte der Schweinegesundheitsdienste der Landwirtschaftskammern oder anderer anerkannter Fachtierärzte für Schweine bedienten. Die Kosten dieser zusätzlichen Überwachung betragen pro Jahr rd. 500.000,00 €

Eine Auswertung der Hygiene-Bonus-Differenzierung im Jahr 2000 durch die Tierseuchenkasse ergab

- a) den Hygienebonus in Höhe von 30 % hatten vor allem die größeren Bestände in Anspruch genommen, während sich kleinere Betriebe dem Verfahren nicht angeschlossen haben; der Aufwand für die Hygienebonusanforderungen und die Ersparnis aus dem Bonussystem machten sich nur für größere Betriebe wegen des relativ hohen damaligen Tierseuchenkassenbeitrages pro Schwein bezahlt, d. h. führten zu einem finanziellen Anreiz.
- b) die Auswertung in Anspruch genommenen Leistungen aller Betriebe ergab außerdem, dass v. a. die Betriebe unter den Leistungsempfängern waren, die den Hygienebonus in Anspruch genommen haben.

Das mit der Schaffung des Hygienebonus verbundene Ziel niedrigerer Tierverluste und damit niedrigerer Leistungen konnte in der Praxis nicht erreicht werden, so dass die 30 %ige Beitragsdifferenzierung ab 2001 wieder aufgehoben wurde.

Das seuchenhygienische Risiko eines Betriebes lässt sich nicht an der Größe des Bestandes festmachen und besteht im Übrigen 365 Tage im Jahr. Wohl aber kommt dem Faktor, ob der Betrieb in einer für diese Tierart viehrefleichen Region liegt oder nicht, eine erhebliche Bedeutung zu. Von daher hat man in Niedersachsen ab 1998 eine regionale Beitragsdifferenzierung eingeführt. Bezogen auf das Gebiet eines Landkreises wurde unter Berücksichtigung der in jedem Kreis gemeldeten Schweine das Beitragsaufkommen und die in Anspruch genommene Leistungen gegenübergestellt. Schweinehalter in Kreisen, die als Nettozahler eingestuft werden konnten, erhielten daraufhin im Folgejahr einen Regionalbonus von 5 oder 10 %. Als die Gegenüberstellung von Beitrags- und Leistungsaufkommen eine Differenzierung nicht mehr rechtfertigt, wurde auch diese Differenzierung 2002 wieder eingestellt. Sie kann jedoch jederzeit, wenn es die Zahlen rechtfertigen, wieder aufgenommen werden und zwar für jede beitragspflichtige Tierart. Mit dieser Differenzierung lässt sich mit vertretbarem Verwaltungsaufwand eine Gleichbehandlung der Tierbesitzer unter Berücksichtigung besonderer seuchenhygienischer Risiken sicherstellen.

Im Vergleich dazu war der einzelbetriebliche Hygienebonus mit erheblichen zusätzlichen Kontrollen und Verwaltungsaufwand sowie zusätzlichen Kosten verbunden. Er ermöglichte auch keine Gleichbehandlung der Tierbesitzer (große/kleine Bestände sowie menschliche Faktoren bei der Vor-Ort-Prüfung).

5.) Beitragsdifferenzierung anhand des Nachweises des Freiseins von bestimmten Infektionskrankheiten

Für den Rinderbereich hat Deutschland 2003 den Antrag auf Anerkennung nach Artikel 9 der Richtlinie 64/432 EWG für den Bereich der BHV₁-Bekämpfung (BHV₁ = Bovine Herpesvirus Infektion) gestellt. Dieser Antrag wurde von der Kommission mit der Entscheidung 2004/558 EG vom 15.07.2004 anerkannt. Ziel der Bekämpfung ist es, den

Artikel 10 Status, d. h. die BHV₁-Freiheit in Deutschland zu erreichen. Der Sanierungsstand in den Bundesländern ist sehr unterschiedlich. Um den Sanierungsfortschritt zu beschleunigen, hat Sachsen Anhalt 2000 eine Beitragsdifferenzierung für BHV₁-freie und nicht freie Betriebe eingeführt. Für 2006 lagen die Differenz in Sachsen Anhalt bei 1,90 € und 7,90 €/Tier. Ab 2005 hat auch Brandenburg eine Differenzierung beim Rinderbeitrag eingeführt. In Niedersachsen ergab eine Auswertung der von der Tierseuchenkasse im Rahmen der BHV₁-Bekämpfung übernommenen Kosten für nicht BHV₁-freie Betriebe einen Betrag von 9,44 €/Rind und für freie Betriebe von 0,48 €/Rind. Daraufhin wurde in Niedersachsen für 2006 erstmals eine Beitragsdifferenzierung 3,80 €/7,50 €/Rind vorgegeben.

Es kann davon ausgegangen werden, dass durch diese Differenzierung finanzielle Anreize beim Tierbesitzer sowie sekundär beim Haustierarzt und Veterinäramt geschaffen werden. Von daher kann weiter davon ausgegangen werden, dass die Beitragsdifferenzierung bis zur Erreichung des Sanierungszieles beibehalten wird. Ist das Ziel erreicht, ist der Grund für die Differenzierung entfallen und sie wird dann wie andere Differenzierung wieder aufgehoben werden.

6.) Zusammenfassung

- 1.) Das Tierseuchengesetz gibt einen Rahmen von Differenzierungsmöglichkeiten bei der Beitragserhebung vor, der es den Tierseuchenkassen ermöglicht, auf der Basis konkreter Zahlen situationsbezogenen Differenzierungen vorzugeben oder aufzuheben.
- 2.) Diese Differenzierungsmöglichkeiten lassen sich mit vertretbarem Aufwand umsetzen und gewährleisten die Gleichbehandlung der davon betroffenen Tierhalter.
- 3.) Das Anreizsystem, das sich aus den Möglichkeiten der dargestellten Beitragsdifferenzierung ergibt, ist sachbezogen, transparent und flexibel und wird von der großen Mehrheit der Tierhalter akzeptiert, da die Gleichbehandlung sichergestellt ist.
- 4.) In seuchenfreien Zeiten und bei niedrigen Beiträgen bestehen wenig Möglichkeiten, finanzielle Anreize über eine Beitragsdifferenzierung zu schaffen. Der Verzicht auf eine Beitragserhebung kann allerdings eine weitere Möglichkeit sein. Auch diese sollte nur auf der Basis konkreter Zahlen erfolgen, um die notwendige Gleichbehandlung sicherzustellen. Praktische Erfahrungen über eine Beitragserhebung und einen Beitragsverzicht bei ein und derselben Tierart innerhalb eines Beitragsjahres bestehen nach meiner Kenntnis bisher nicht. Erfahrungen gibt es nur im Hinblick auf einen generellen Beitragsverzicht pro Jahr und Tierart, z. B. bei Pferden. Jede erneute Einführung einer Beitragspflicht bei einer im Vorjahr beitragsfrei gestellten Tierart führt anschließend zu erheblichen zusätzlichen Diskussionen mit den Betroffenen und damit zu einem erhöhten Verwaltungsaufwand.

Zum Schluss sei mir noch eine persönliche Äußerung erlaubt. Ich möchte Sie nachdrücklich unterstützen in der Aussage, dass ein so genanntes Ad hoc-System die schlechteste aller denkbaren Lösungen ist. Sie sollte in der Zukunft allein aus Kostengründen vermieden werden. In einer akuten Seuchensituation mit einem hohen öffentlichen und politischen Druck Entschädigungsbeträge ermitteln und festlegen zu wollen, ist für alle Beteiligten der schlechteste und mit Sicherheit der teuerste Weg. Ziel muss es sein, in Zukunft professionell mit der Erstattung von Entschädigungen und sonstigen Kosten in den Mitgliedsstaaten umgehen zu können. Das setzt das Vorhandensein von Spezialwissen und klare Absprachen mit den Beteiligten in seuchenfreien Zeiten voraus. Die Systeme müssen außerdem so flexibel sein, dass sie Veränderungen in der Tierhaltung selbst, der jeweiligen aktuellen Seuchensituation sowie der Änderung rechtlicher Vorgaben Rechnung tragen können. Dies induziert auch, dass den Mitgliedstaaten die Möglichkeit eröffnet werden muss, beitragsdifferenzierende Systeme einzuführen, bzw. dort, wo die schon realisiert wurde, die Option einer Beibehaltung eröffnet werden muss, denn wie die Beispiele zeigen, ist dies durchaus auf von regionalen Gegebenheiten abhängig, die von erheblicher seuchenhygienischer Relevanz sein können. Dies gilt in besonderem Maße für die gesamte Gemeinschaft.

Herr Dr. Bätza und Herr Dr. Breustedt erhalten eine Durchschrift dieses Schreibens.

Mit freundlichen Grüßen
Im Auftrage

Dr. Flebbe

Anlage

- Text § 71 TierSG
- Text seuchenhygienische Einheit Beitragssatzung Tierseuchenkasse

2.) Zum Vorgang

AGROSEGURO

COMMENTS TO EXPERT WORKSHOP ON COST-SHARING SCHEMES FOR EPIDEMIC

LIVESTOCK DISEASES

Responding to the invitation to answer a series of questions put forward in the working document, which was prepared by the organisers of the workshop on the above-mentioned subject, and having reviewed the information received in the course of that workshop, we would like to present a series of reflections on the matter, from the point of view of an entity specialised in the management and administration of agricultural insurance.

1. In relation to the criteria established in order to determine a harmonised cost distribution system, it is suggested that state aid to support this type of system must be compatible with a series of measures, instruments and commitments. However, no description is given of what this state intervention would be, what it would act on and at what time it would intervene.

In this regard (Point 2.IV. Prevention of distortion of competition), we would like to highlight that this type of coverage, in which there is not a market because private initiative alone cannot assume the risks, state intervention becomes necessary, and that, in order to provide incentives to private initiatives, it might also be necessary for society to accept a certain degree of lack of competition.

2. It is important to note that, whatever the system chosen, both human and animal health are responsibilities of the authorities. Management of them cannot and should not be transferred to a third party. The obligation to establish cost-sharing schemes for diseases with considerable impact on third parties, the so-called DHE's, must be defined as matters of Public Order or general interest, in accordance with the definitions of the EU themselves.

The appearance of an epidemic outbreak would imply two types of costs:

- Indirect costs: veterinary costs, sample taking, analyses and other costs deriving from the action plan, which must be assumed by the Authorities. In addition, there are other costs resulting from the closing down of markets (of both animals and derived products), falls in prices, losses in transportation, reduction of tourism, etc.
- Direct costs: deriving from the death or slaughter of animals, their destruction, disinfection, the loss of production, costs generated by enforced immobilisations, etc. It would be possible to consider sharing at least part of these costs.

Both of these types of cost would have to be taken into account when determining the state intervention.

3. With regard to the categorisation of diseases, we believe that this classification should correspond to technical criteria, which would permit objective classification. In our opinion, it is these criteria that should be harmonised. The result arrived at in each one of the member states would be different classifications, depending on the real health situation in each country, and even each region.

In light of the above, we have a number of doubts as to the validity of the classification given a priori in the working document. Thus, if there is an outbreak of foot and mouth disease, included in the first group, in accordance with the working document, the losses would be covered by state aid. However, and as we saw in the workshop, there are in fact different systems of insurance coverage guaranteeing part of the losses that this disease could generate.

On the other hand, diseases of an endemic nature, which produce constant losses, are included in the third group, despite the fact that it is difficult for coverage to be provided for them by the aforementioned systems.

Likewise, we ask ourselves in which category diseases such as swine fever or BSE would be placed.

4. With regard to the "incentives" to ensure that farmers are more efficient at detecting and declaring a possible outbreak, our experience as risk managers tells us that better results are obtained with positive measures than with negative ones. Penalisation introduces a new uncertainty for the producers, who will weigh up the possibilities of avoiding it by using the tools they have to hand.

One clear example is a farmer who is faced with systematic analyses carried out by the Authorities and, given the risk that his most productive animals will prove positive, hides those animals in order to avoid the possible consequences deriving from the analysis.

What is required is a system that rewards measures to reduce or minimise the risk. It is better to have a system that rewards those farmers who take such preventive measures, by means of subsidies.

We would also like to again point out, as was said at the meeting, that the time necessary to detect an outbreak is different depending on the disease and the species. We must also add that the symptoms might remain unnoticed by a farmer who is not necessarily an expert in recognising diseases, particularly the less well-known ones. Therefore, it is difficult to ascertain

when a farmer has concealed livestock or simply has not detected the appearance of an outbreak in time, and therefore a reduction in the compensation might not be justified and could have negative consequences. It would be different if it was demonstrated that the farmer acted in bad faith, in which case s/he would be guilty of a crime against health and should lose any right to compensation.

5. The inclusion of compensation to be paid to the farmer for any kind of cost that may be incurred when an outbreak takes place, or deriving therefrom, in order to promote early declaration, raises a number of questions.

First of all, as there is no uniform system of accountancy or taxation, on the basis of what parameters will the loss suffered by the farmer be evaluated?

Secondly, the different production systems currently in existence (fattening farms with short cycles, farms with closed cycles, etc.) would have to be taken into account in order to establish the different amounts to be paid, based on the different possible losses they might incur. Evidently, the losses of a producer who can re-establish production in three months will not be the same as the losses of a producer who requires a year to do so.

And, finally, who should pay these contributions into the system and who should assume responsibility for payment of the corresponding compensations?

6. With regard to the possible options that are presented for the implementation of a cost distribution system, we would like to note the following:

- In the case of public funds and public insurance, we would question their efficacy and ability to cope with events that give rise to great losses. Experience has shown us that the payment of compensation, which moreover may not correspond to technical criteria, could take some eighteen months, compared to the response of private insurance companies, based on insurance contracts that establish virtually immediate payment.
- In the case of mutual funds, one problem that should perhaps be considered is who will assume the surplus of claims that might arise, their taxation system and the system of competencies with regard to other institutions.
- Private insurance and the pool are not different figures. The pool is the grouping of private insurance entities. It is a mechanism set up by the insurance industry to combine individual capacities in order to be able to cope with the effects of certain catastrophic risks. Some examples are pools of large risks, nuclear risks and aviation, among others.

These have proven to be the best solution to cope with large losses deriving from risks of this type. But if they are to be used in the case of animal health risks, well-defined state participation is vital, sharing the burden of financial compensation to farmers, subsidising part of the premium and establishing a reinsurance system, without which the private sector would not be willing to accept a risk which on occasions could lead to bankruptcy.

An added advantage of this type of mechanism is that they bring economies of scale. These economies of scale would be difficult to achieve in public systems, above all if we take into account the sheer volume of personnel employed by the authorities.

- The productive sector's misgivings regarding the fact that insurance companies seek to make a profit is not justified. In a free market economy, seeking returns on capital is the principle that governs all economic activities, including that of farmers themselves.

The relation between a producer and an insurer, through an insurance policy, is a contract in which a series of rights and obligations are stipulated. The producer, through the payment of a premium, contracts a service from an insurance company, which in return for that premium will pay compensation if the event occurs.

Payment in return for a service does not present problems and nor should the fact that all those who carry out an economic activity seek to make a profit, including the insurance companies which, moreover, must assume by themselves - i.e. the shareholders - any losses they may incur as a result of the payment of claims of a catastrophic nature.

7. With regard to the last question, that is, whether, in addition to the farmer, other members of the production chain should also participate in the cost distribution system, our answer is as follows:

All participants in the production chain, including farmers, indirectly contribute, through taxation, to the funds used to repair damage caused by a disaster.

However, the suspicion or appearance of an outbreak that implies losses in all sectors only gives rise to aid to the farmers. Therefore, should all sectors participate in this system, or only those that receive these compensations?

Such participation might perhaps be contemplated by means of the introduction of a regulatory framework in the different points of the production chain, requiring from each one of them certain health, hygiene and safety standards that must be complied with in their commercial relations.

8. In the course of the document, several times reference is made to an obligatory distribution system. Though our area of business is limited to insurance, in a free market economy the development of obligatory insurance has always proven to be problematical. Up to now, it has only been feasible when there is the possibility of damage to third parties, and it has been put forward as a solution to provide guarantees to the victim in regard of the financial solvency of the person responsible for the damage. The typical case is that of motor vehicles: their use automatically generates a risk that must be assumed by the person who generates it. That would not be true in the case of livestock farming.

In the case of these kinds of epidemics, there could in some cases be the possibility of a guarantee to third parties, understood as damage to society.

However, the farmer is always the first victim and, moreover, as business owners, farmers must be able to manage their own risks.

Related to this question of obligatory insurance, we would like to point out that the measures envisaged in the document make reference to a posteriori situations, and there is no reference to a priori actions. We believe a prevention policy needs to be formulated to promote preventive measures that minimise the appearance and the consequences of outbreaks of diseases.

9. Finally, and as members of the European Insurance Committee, we fully subscribe that expressed in the communiqué of 30 March from that Organisation.

As administrators of agricultural insurance in Spain, we would like to particularly highlight the need for support from the Authorities to producers through subsidies on the cost of the premium, as well as the system of support to reinsurance in order to favour this kind of risk management system.



Ministero della Salute

**Dipartimento per la sanità pubblica veterinaria la nutrizione e la sicurezza
degli alimenti
Ex Ufficio VIII**

Comments on the working paper concerning the Cost-sharing scheme for epidemic livestock diseases

Following the meeting held in Brussels on March 17th, 2006, we would like to express some remarks on the Working Paper offered to our attention, according to the invitation contained in paragraph 5.

- a) We agree with the criteria for harmonised cost-sharing schemes found in section 2.
- b) We do agree with the general lines of the rules proposed in section 4, however, there are some points we would like to comment upon:

4.1 Categorization of animal diseases (criteria 1)

1. With regard to the point concerning efficient standards, the document does not clearly identify the entity in charge of setting these standards. If this entity is not the same for all MSs, standards may not be equal all over the EU, and therefore the economic burden could be heavier, or lighter, for some MSs or breeders. This may generate a distortion in the market.

2. We agree that for all Diseases with High Externalities (DHE) the cost sharing scheme should be compulsory, and we do believe that public authorities should have an active involvement in any scheme.

3. With regard to Diseases with Low Externalities (DLE), with a significantly lower general economic impact than DHE, we think the Public authorities should cover only a fixed rate of each culled animal, leaving the breeders free to adhere to an integrating insurance system.

4. Concerning Diseases with No Externalities (DNE), we believe that cost-sharing solutions can be left to private insurance markets.

5. It is true that the DHE may depend on regional factors, but we believe that some diseases do have an extremely high social and economic impact and higher infectiousness regardless of regional factors. This group of diseases (DHE) certainly needs to be thoroughly identified at a EU level. Once the list of DHE is drawn up, then we believe the cost-sharing scheme should be compulsory for each of them and for each MS.

4.2 Incentive compatibility (criteria II)

6. We would be theoretically favourable to differentiated contributions to a cost-sharing scheme, according to the effect of risk-relevant factors, but we do believe it may not be easy to apply and it would have to be updated on a yearly basis. We would certainly be more in favour of providing a bonus to farmers who take specific measures to decrease their individual risk.

7. We do not completely agree with the implementation of a deductible, since, first of all, there are some diseases that spread between farms regardless of any preventive measures; furthermore, we believe that a deductible could lead breeders to move the animals after the outbreak of a disease close-by, therefore producing an effect opposite to its intention.

8. We agree with the general idea of the proposal, but we would like the system to take into account the characteristics of morbidity and mortality of each disease.

9. We concur with the proposal of having the cost-sharing scheme cover all production risks, to avoid adverse incentives.

10. We agree that some losses, which cannot be influenced by farmers, should be indemnified fully without providing adverse incentives.

11. We concur that a cost-sharing scheme should not bear the cost of drops in market prices for animals following serious livestock epidemics.

12. With regard to this point, we believe that the animal value should be indemnified according to pre-crisis market prices, as provided for in Regulation 349/2005. Experience gathered in several epidemics that took place in Italy in the past years shows that post-crisis prices are inflated; furthermore, markets are stabilised only as soon as replacement has taken place, and therefore when indemnification has already started.

13. We agree that business interruption could be compensated with flat rates.

4.3 Balancing costs and responsibilities, compatibility with Community requirements (criteria III-V)

14. We agree with the concept in itself and farmer's contributions should be the same in all MSs, but the harmonisation must also cover the method of assessing the value of culled animals. As a matter of fact, in Europe there is wide range of assessment systems, which does distort competition, since the value attributed to culled animals is extremely diverse.

15. With regard to the level of public financial support to cost-sharing schemes, we would agree with option a), with fixed percentages of losses for specific diseases funded by Community and MS contributions in case of disease outbreak.

c) The options presented under point 16 cover the whole range of harmonised cost-sharing schemes. We agree to maintain a certain degree of flexibility within each MS, so as to implement the cost-sharing scheme most suitable to each livestock production system.

d) We believe that if there is a strong integration between the different elements that compose the food-chain, usually the owner of the holdings is also the owner of the slaughter houses. It is therefore unavoidable for costs to be shared by all elements.

Working Paper for the Expert Workshop on Options for Harmonised Cost-sharing Schemes for Epidemic Livestock Diseases

Comments from the Joint Industry/Government Working Group on sharing responsibilities and costs for animal diseases (JIGWG) Secretariat (England)

Overall comments

1. We welcome this very helpful paper which sets out the basic principles for cost sharing schemes across the European Union. However, we have a concern that the language in the paper is written in terms of applying insurance principles and although this may be a useful model in many ways, following the logic of this model uncritically without reference to wider 'public goods' may lead to counter-intuitive conclusions which are problematic.
2. Although sharing responsibility as well as cost may be implicit in Criterion III, we consider that the need to share responsibility between the public authority and Industry should be given a greater emphasis in the paper.

Section 2 – Criteria for harmonised cost-sharing schemes

3. We agree with the six criteria as general principles to be applied to any cost sharing scheme in a member state. Any cost-sharing scheme will need to take account of the public interest in managing animal disease (I).¹ It is also important that schemes provide incentives for good practice and disincentives for bad practice (II). It is particularly important that cost-sharing schemes do not result in any adverse incentives. The financing of cost-sharing schemes need to take account not only of the responsibilities involved (III) but also of the

¹ There should also be a mechanism for dealing with new and emerging diseases in any categorisation system.

costs and benefits associated with disease problems. It is important that any cost-sharing scheme does not unduly distort competition between Member States (IV). Cost-sharing schemes must be compatible with EU financial instruments and other initiatives (V), although it must be noted that it may be worthwhile to fine tune these (or at least their implementation in Member States) to ensure compatibility and to assist the design of efficient and effective cost-sharing schemes. The difficulty will be deciding on the detailed specification and implementation of individual schemes and ensuring harmonisation across the EU whilst allowing for the much-needed flexibility of implementation mentioned under VI.

4. A point not explicitly mentioned in the descriptions of the criteria is whether there should be a ceiling placed on the industry contribution to any cost sharing arrangement. This issue may be covered by the criteria on balancing costs and responsibilities (III) but it would, in our view, be sensible to make this explicit. If there were to be a major exotic disease outbreak with a substantial cost, then it would be unrealistic to expect the industry to meet a fixed proportion of the total cost if that total cost is very large. For example, the direct cost of controlling the FMD outbreak in the UK in 2001 was over £3 billion. If, for sake of argument, the industry contribution to a cost sharing scheme were 50% of the total cost, then without a ceiling that would amount to £1.5 billion. The proposition, therefore, is that the industry contribution to a cost sharing scheme cannot be unlimited.

Section 3 – Main alternatives for cost-sharing schemes

5. We agree that we cannot continue as we have in the past (A). Past public expenditures have been too high and have not provided adequate incentives/disincentives to good/bad practice. Ad-hoc measures (B) are unlikely to be either effective or efficient and are likely to result in a distortion of competitiveness between Member

States. The ‘one-size-fits-all’ framework (C) is not appropriate given the enormous diversity between Member States and the nature of the animal disease problems that they face. Therefore, we agree that the final option (D) as the most appropriate.

Section 4 – A harmonised Community framework for national and regional cost sharing schemes

4.1 – Categorisation of animal disease (Criteria I)

6. The full meaning of **Rule 1** only became apparent when the economic model was presented at the Expert’s Workshop. Indeed, animal health standards are already higher, or go further than legal requirements in a number of instances for various reasons, either related to particular circumstances in member states, or to comply with farm assurance, retailer specifications etc².
7. However, in the context of a statutory cost sharing arrangement, it must be clear what this Rule is purporting to do. If a purpose of the rule is to say that a particular farmer will not be entitled to basic compensation payments if she or he did not meet an arbitrary animal health standard that was higher than the legal standard (which is met) then this, in our view, will not be workable in practice and a public authority will be open to legal challenge. Would not a simpler solution be to enhance the legal standards so that it is always higher than the efficient standard?
8. **Rules 2, 3 and 4** all relate to the idea of categorisation of diseases according to ‘externalities’. Although the rationale in the paper is excellent and internally consistent, the categorisation into three classes of ‘High’, ‘Low’ and ‘No’ externalities may be insufficient for us to make the distinctions we want to draw between different diseases. In our

² You may wish to note that work on farm health planning is underway as part of the GB Animal Health and Welfare Strategy. We are happy to provide details on request.

view, there is a range of different degrees of effects of different types of externality that do not fit easily within this categorisation. For example, FMD may have potentially high externalities of disease spread within the livestock industries affected and some externalities affecting wider society (e.g. impact on animal welfare). In comparison, Avian Influenza may have not only high externalities between producers (but within the poultry industries), but also potentially high externalities relating to public health. These externalities are very different from one another and, in our view, should be distinguished rather than put together within a single category. Therefore, we take the view that it is desirable to categorise diseases into more than three categories.

9. Moreover, the concept of 'externality' has a specific meaning within economics (as do other concepts, such as 'public goods') that may not be fully understood or appreciated by non-economists. It may be better to be more explicit and categorise disease problems according to their importance to public health, animal welfare, international trade etc. rather than use a broad 'externality' categorisation.
10. Notwithstanding the above, diseases with important externalities (e.g. important implications for public health) should, ideally, have compulsory cost-sharing schemes associated with them. If they are not compulsory, all livestock keepers would have to comply with certain standards/regulations regardless of their participation in the scheme (and would be held responsible for compliance), but would not have to pay into the scheme and would not receive benefits from the scheme, such as compensation payments for disease losses.
11. Diseases with externalities of low importance could indeed have cost-sharing schemes that are voluntary, but again, compliance with certain standards/regulations would be required to ensure that the scheme was not undermined. Disease problems that have no important externalities can be left to the market.

12. **Rule 5** - We firmly believe that disease categorisation should be done by each cost-sharing scheme but according to (broadly-defined) harmonised criteria to allow for differences between regions and Member States. However, there may be a risk of distortion of Community trade if different regions interpret the harmonised criteria very differently. However, if the categorisation is carried out on an objective basis, then this should not present a major risk.

4.2 Incentive compatibility (Criteria II)

13. **Rule 6** – Although we agree that, in principle, contributions of farmers should reflect their individual risks, we believe that this would be difficult to achieve in practice. We do not expect that a contribution to a cost sharing scheme, if it takes the form of an ex ante levy, to amount to a significant element of farm costs (estimates based on various modelling work that we have done for exotic diseases put it at <0.3% of farm costs). If this is the case, then marginal changes in relatively small payments are unlikely to lead to behaviour change. However, if we do conclude that an ex ante payment is necessary because of its link to individual risks, then a criterion to be applied to any cost sharing scheme should be that it is simple to understand and economic to operate.

14. Regional differentiation based on livestock density is also, in our view, too crude an approach because this density is not the most important characteristic for some species in respect of disease risk. For example, for poultry the key differentiation is between ‘free range’ and intensive. Also in some areas of England, there is extensive use of ‘common land’ for grazing and this does not necessarily correlate with livestock density in a region.

15. **Rule 7** – We agree that in principle the risk should not be completely transferred to the cost-sharing organisation in order for there to be an incentive to reduce risk. However, in England and Wales

compensation is only paid by public authorities for direct losses (i.e. value of animals compulsorily slaughtered) in the event of a outbreak for those diseases that are covered by the Animal Health legislation. However, there are also consequential losses suffered by the farmer e.g. loss of business etc that are not covered by compensation arrangements i.e. farmers do bear a loss currently even if they are compensated for direct losses.

16. **Rule 8** – We agree that, in principle, it is important that compensation payments adequately incentivise early reporting of disease. However, the way in which this needs to be done will need to be different for different species/livestock production systems and diseases because patterns of infection, morbidity and mortality will be different in each case. For example, FMD in sheep does not display obvious clinical signs for some time after infection. In a cost sharing scheme, compensation could be linked both to pre-outbreak conditions on farm such as biosecurity standards as well as speed of reporting suspicion.

17. In addition, we need to avoid the risk of creating perverse incentives for farmers through the imposition of a crude early reporting condition for compensation payment on farmers. It is conceivable that if a crude early reporting condition were imposed, then in an outbreak situation, farmers would be incentivised to call out veterinary authorities as a contingency measure just in order to reduce the risk of non payment of compensation. This could lead to the veterinary authorities becoming overwhelmed by calls from farmers.

18. **Rule 9** - In principle we agree that all production risks should be covered by a cost sharing scheme where the producers can shift losses from one area to another. However, practically this is complex and could lead to unlimited expenditure. It begs the question on where you draw the line for consequential losses? If an ex ante levy approach or insurance approach were adopted the contribution rates

from producers would have to be unsustainably high to cover both direct and consequential losses.

19. **Rule 10** - We are not clear what kind of losses are envisaged under this rule and would require further information to give an opinion.
20. **Rule 11** - We agree that price risks cannot be covered by a cost sharing scheme. However, we think that it is unrealistic to rely on futures markets to manage price risks because they are not developed for most livestock species and farmers will need some other possible form of state aid when market prices are greatly reduced as a result of a disease outbreak.
21. **Rule 12** - The use of replacement values at the time of replacement will be complicated to administer and will lead to delay as scheme officials argue with farmers about what precisely is being replaced. For example, there is little point in replacing a cull ewe at the end of its productive life with another cull ewe and could lead to perverse incentives. In our view, the value of an animal should be based on its value at the time of slaughter.
22. Also, in our experience, the market price of affected livestock increased significantly after the FMD outbreak in 2001 in the UK. If this were to lead to increased compensation payments as a move to replacement value would suggest, there would be an upward spiral in market prices as farmers competed in the market for replacement animals. The overall impact, therefore, would be to increase the cost of controlling an outbreak.
23. **Rule 13** – We do not believe that flat rate compensation for consequential loss is appropriate in a cost sharing scheme given our views on Rule 9.

4.3 – Balancing costs and responsibilities, compatibility with Community requirements (Criteria III – IV)

24. **Rule 14** - We agree with the principle that any public contribution to a cost sharing scheme should be designed to avoid distortion of competition.

25. **Rule 15** – We agree with the proposition that public financial support to a cost sharing scheme is a political decision. We believe that public financial support should be dependent on categorisation of diseases which relate to the public interest in managing the disease. As we have said above (Rule 5), this needs to go further than the three categories (High, Low and No) identified in the paper.

4.4 – Flexibility of implementation at national/regional level (Criteria VI)

26. JIGWG have discussed some of the institutional models described in this section of the Working Paper. Our preference would be for Option A1 (Public fund) to meet direct costs of managing exotic disease outbreaks. For the reasons stated in the paper, contributions from farmers would need to be compulsory. A public body with farming industry involvement could be designed in such a way as to be sufficiently flexible to implement cost-sharing schemes and provide the right incentives and strike the right balance between public and private costs.

27. In our view the complicated nature of disease risks, including public good and externality considerations, means that an insurance-based approach would be difficult to implement to meet direct costs for exotic disease outbreaks with high externalities (unless it is through a Public Insurer (Option B)). However, we can see a role for Option A2 (Mutual fund) to meet indirect costs (consequential losses) and/or direct costs for diseases which have no externalities and public health implications.

Section 5 – Invitation to provide comments

28. We have responded to questions a) to c) (see above). As regards question d), in principle, we agree that others in the food supply chain ought to contribute to a cost sharing scheme because some of the costs and benefits of disease control fall them. However, contributions to a cost sharing scheme from others along the supply chain may be difficult to achieve but discussions with major food retailers (in the first instance) may be worthwhile.

JIGWG Secretariat

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Annex 5: Possible categorisation scheme for epidemic livestock diseases on basis of public relevance and need for EU coordinated action

				Participation of operators in cost-sharing schemes has to be compulsory		Participation of operators in cost-sharing schemes could be voluntary			
				Public relevance of disease Responsibility for public intervention because of possible impacts on public health, animal health/welfare, the environment and the wider economy					
					<i>Very high</i>	<i>High</i>	<i>Moderate</i>	<i>Low</i>	<i>None</i>
		Ratio EU: MS Financing	Total public contributions (EU & MS)	80%	60%	40%	20%	0%	
Need for EU coordinated action Responsibility of EU to take coordinated action because wider EU interest is affected	<i>Very high</i>	70 : 30		Disease A	Disease B*				
	<i>High</i>	50 : 50			Disease C	Disease D*			
	<i>Moderate</i>	30 : 70							
	<i>Low</i>	0 : 100							

* Spread of disease cannot be prevented by proper bio-security measures of operators