

Implementation of the EU legislation on organic animal production with focus on animal health, welfare and food safety: description, analysis and recommendations for the future based on questionnaire survey among SAFO participants

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INTRODUCTION

The European Union (EU) introduced the regulation 1804/1999 in order to harmonise the rules of organic livestock production across member states and to make all organic systems across EU members subject to minimum standards. The regulation provides a conceptual framework within which animals should be raised and a formal set of rules that direct the certification of livestock enterprises. One of the overall aims is to establish and maintain a high level of animal health and welfare in organic livestock herds by means of appropriate selection of breeds and strains, a balanced high quality diet and a favourable environment.

The implementation of the organic principles and the common organic standards concerning livestock production is, however, a huge challenge. Organic livestock production systems differ significantly across and between EU member states. Moreover, each new member state brings in new perspectives, and particular issues to the debate about the development of the EU standards. One of the aims of the concerted action EU network project SAFO was to describe, analyse and give recommendations in relation to the EU standards in the area of organic livestock production with particular focus on animal health and welfare as well as food safety. With regard to the objective of the work package on standard development several problems were identified:

- Terms used in the EU-Regulation are interpreted quite differently in the EU-countries. There is need for clear definitions of the most relevant terms such as ‘natural milk’, ‘appropriate breeds’, ‘therapeutic effects’ etc.
- An overview with regard to the situation in the various European countries concerning the specific constraints in relation to animal health and food safety under the organic framework conditions is missing.
- There is need for a more profound link between the different aspects of the standards to provide a more comprehensive understanding.

The underlying idea of SAFO as well as the present report is that the standards need to be revised on certain points in order to promote improved farm practices in organic livestock production. Within this report, particular areas in the current EU Regulation, covering the issue of animal health, welfare and food safety, are discussed with specific emphasis on the diversity within Europe. Moreover, the report addresses problem areas, which are experienced in practice or judged to be likely to emerge in the near future. We give suggestions to solutions based on the reports from SAFO participants and current knowledge.

Organic sector development and animal production

Organic and in-conversion land area in the enlarged EU (25 countries) reached an estimated 6.0 million hectares (3.8 per cent of UAA) on 155,400 holdings in 2004. Land area increased by 3 per cent compared with 2003, the number of farms declined. It appears as if existing producers converted more land, whereas the willingness of new producers to convert was affected by

uncertainties over the outcome of the CAP reform and in the market. A very different picture emerges for some individual countries: land area increased in Portugal, Greece, Austria, Spain, Netherlands and Germany, whereas it declined in Denmark, and in the UK. Increases in land area of more than 10 per cent also occurred in many of the new EU member states, e.g. in Estonia, Lithuania, Hungary and Poland (Lampkin Eurodata, 2005; SA, 2005). In the EU 15, nearly 60% of the certified organic land area are used as grassland (Hamm and Gronefeld, 2004; Olmos and Lampkin, 2005). There appears to be a slight shift towards arable land in the types of farms that have converted since 2000. However, a very different picture emerges for individual countries. In most Mediterranean countries only 10% of land area is grassland, whereas higher than average grassland percentages are found mainly in the North and in the West of the EU 15 and in Austria with its many mountain regions.

As not all countries report official statistics it is difficult to get an overview of the organic livestock production in Europe. The most complete data set for broad categories of organic livestock exists for 2002 from two reports (Praznan et al., 2004; Olmos and Lampkin, 2005) and estimates have been made based on a variety of sources for 2003 and 2004 (see Table 1). Unfortunately it is not possible to break this down further at EU level, because for many countries only aggregated data exist.

Table 1: Numbers of organic animals in the EU 25 in 2002 and 2003 and main producing countries

Animal category	2002	2003	2004	Major producing countries
Bovine	1.4 million	1.5 million	1.56 million	Austria, Germany, Italy and Denmark
Sheep	1.71 million	1.63 million	1.8 million	Italy, UK, Germany and France
Pigs	553,000	472,000	493,000	Germany, Denmark, France and UK
Chicken (layers and broilers)*	16.1 million	17.3 million	18.3 million	France, UK, Germany and Denmark

Source: Padel (2005) and Padel and Lowman (2005)

Cattle is the main livestock species farmed organically in the northern, central and western European countries, reflecting trends in general agriculture. Dairy cows appear particularly important (more than 40% of bovine stock) in Denmark, France, Germany, the Netherlands and in the UK, but a detailed breakdown of bovine species is currently not available for all countries.

Sheep and goats are the most important species in the Mediterranean, where emphasis is put on milk production, and in the UK and in Ireland where the objective is meat production.

Pig production is concentrated in Germany, Denmark, France, UK and Austria. In 2003, these countries together kept more than 75% of all pigs in the EU while less than 2% were kept in the new member states. In Austria more than 6000 holdings are keeping organic pigs, but the average number of animals kept per holding is very small (6.1 heads per farm keeping pigs).

The biggest producer of **organic chickens** (both layers and table chickens) in 2003 was France with more than 6 million birds, followed by the UK. For other categories of poultry data exist for very few countries only.

In order to supplement existing statistics SAFO asked its partners in 26 European countries to collect some information about the size and importance of organic livestock farming in their country. Some countries were able to supply data on the proportion of organic farmers that keep stock. This shows a considerable variation of less than 15 per cent of organic producers keep livestock in Hungary, approx 25% in Spain (Trujillo, 2004) and to over 90 to 100% in the Alpine countries, some new member states and in the UK.

As far as the market for organic products is concerned this is estimated to be worth approx 10.5 to 11 billion € in total. The most important markets exist in Germany, France, the UK and Italy. High market penetration has been reached in Denmark, Austria, Germany or Switzerland, but considerable variation occurs between product categories. In the market for organic animal products, the organic share of the total market by volume was in 2001: 1.6% for beef, 1.3% for eggs and 1.2% for milk, similar to most crop products where on average between 1.0 and 1.8 were reached in the EU 15. Sheep and goat, pig and poultry meat reached 0.6% or less, lower than for grazing livestock products and most crops. There are no more recent market share data on a EU wide basis.

Difficulties in establishing a balance between supply and demand exist in the organic markets for milk, and beef, sheep and goat meat. In 2001 32% of organic milk, 31% of organic beef and 46% of sheep and goat meat had to be sold to conventional outlets for conventional prices. The situation has improved since then, but selling a proportion into conventional outlets resulting in lower farm gate prices, remains typical for products of organic grazing livestock. This may be a reflection of the fact that the market is not the only factor influencing the stocking density with ruminant livestock production on organic farms. The farms' natural condition and the interrelationship in organic farming systems with grazing livestock providing advantages for soil fertility and crop rotations are also clearly important.

The market situation for dairy in particular is further hampered by the structure of the industry with increasing concentration of processing plants that may run separate organic lines. Not in all regions of Europe producers have access to factories processing organic milk. Furthermore, in many countries organic dairy farms are small scaled and scattered over large areas resulting in high costs for separated collection of the organic milk (Michelsen et al., 1999; Hamm and Gronefeld, 2004). This stands in clear contrast to most markets for organic crops, where nearly 100% of all production is sold to an organic outlet. A trend is reflected in farmer premiums, where on average 100% is achieved for organic cereals (although considerable variation throughout Europe exists) compared with on average 18 to 40% for products of grazing livestock.

The markets for pigs and poultry appeared more balanced or even undersupplied. In 2001, more than 95 per cent of pork, eggs and poultry meat found an organic market (Hamm and Gronefeld, 2004). Furthermore, intensive livestock products carried higher premiums for the farmer, and it appears that they are largely produced where a market exists. However, the gross margins for producers remain tight.

MATERIAL AND METHODS

All SAFO project participants and three connected participants (Romania, Czech Republic and Turkey) were asked to reply on a questionnaire. An example of the questionnaire is attached to the report (appendix 1). The questionnaire covers the EU-legislation presented in Box 1-5. The project participants were asked to cover the questions:

- 1) *Is there a problem with the implementation of this specific paragraph at the farm level in your country?*
- 2) *If there is a problem, what are the reasons and the background for problems with the implementation?*

Participants were asked to fill in the questionnaire based on their own background and knowledge, and if possible on surveys and literature as far as possible. They were furthermore encouraged to discuss their answers with legislation and certification bodies, animal health services, etiologist(s) working with farm animals and advisors with practical insight into organic farming in the country.

At the 3rd SAFO workshop, main findings were presented and discussed. In some cases further clarifications were added in the process of analysing the results of the questionnaire. Furthermore, all SAFO project participants were asked to make a short presentation of the conditions and development of organic livestock farming in their countries at the 3rd SAFO workshop.

RESULTS

Responses were obtained from 23 project participants in 18 countries. In Table 2, a brief summary is given of experienced problem areas, which will be presented in more details in the following. The table only gives a rough indication of the reporting from the countries, irrespective of the source of the problems. This could be either a frequently occurring conflict within the normal organic farming practice in the country, or a perceived area of conflict based on the formulation of the regulation. .

Table 2. Overview of problem areas in each country, irrespective of sources of the problem. If problems in the area are reported, it is marked with 'X', otherwise with '0'.

Group *)	Country	Disease prevention principles					Disease Treatm.	Food Safety	Other
		General	Breeding	Feeding	Housing	Outdoor			
1	Sweden	0	X	X	X	X	X	X	0
1, 6	Norway	0	X	X	X	0	X	(X)	X
1	Finland	X	X	X	X	X	X	0	0
2	Denmark	(X)	X	X	X	X	X	0	X
2	UK	(X)	X	X	X	X	X	X	X
2	Germany	X	X	X	X	X	X	X	X
2	The NL	X	X	X	X	X	X	X	X
3, 6	France	X	X	0	(X)	(X)	X	0	X
3, 6	Greece	X	X	0	0	X	X	X	X
3, 6	Italy	X	X	X	X	0	X	X	0
4, 6	Austria	X	X	X	X	X	X	X	X
4, 6	Switzerland	X	X	X	X	X	X	X	X
5, 6	Slovakia	0	0	0	0	X	0	0	0
5, 6	Poland	0	0	X	X	X	X	0	X
5, 6	Slovenia	0	X	X	X	X	X	X	0
5	Czech R.	0	0	0	0	0	0	0	0
5	Latvia	X	X	X	X	X	X	X	X
5	Estonia	X	X	X	X	X	X	X	X
5, 6	Hungary	0	0	X	X	0	X	0	0

*) Groups = 1: North Scandinavia, 2: Intensive farming, mid-Europe, 3: Mediterranean area, 4: Alpine region, 5: New member countries, 6: Countries with mountain areas

Most of the problems reported in the category ‘other’ concern mutilations: either dehorning of cattle or attaching elastic bands to the tails of sheep, or in some cases castration of pigs. Problems reported in the feeding section concern both use of home-grown feed as well as availability of organic feedstuff, and in many cases diets for mono-gastric animals. Most of the countries having reported problems in the ‘food safety issues’ refer to problems concerning the use of traditional veterinary medicine for non-treatment purposes, which can be antibiotics, hormones or anti-parasitic medicine. This can be a potential food safety problem, but is maybe more a problem of understanding that disease prevention should be based on non-medical methods. Some of the problems are linked even though they are reported under two different categories. E.g., a number of countries report problems with tied stall systems and at the same time problems with appropriate exercise areas during the winter. The majority of problems reported in housing and outdoor life involve poultry. These two problems are in some ways the same problems, but appear here as two separate problems.

In Table 3 problems reported in relation to specific animal species are reported. The number of times mentioned is indicated by giving from one to three ‘X’s. The table needs to be interpreted with great caution, as the many general remarks are not included, e.g. ‘old buildings’ or ‘no available breeds’ can be included in the answers of the questionnaire without addressing specific animal species.

Table 3. Problems explicitly reported for the animal species ‘dairy cattle’, ‘pigs’, ‘poultry’ and ‘small ruminants’ (goats and sheep).

Group	Country	Dairy cattle	Pigs	Poultry	Small ruminants
		Problems	Problems	Problems	Problems
1	Sweden	X	X	X	0
1, 6	Norway	X	X	XXX	XXX
1	Finland	0	X	X	0
2	Denmark	X	XX	XXX	0
2	UK	X	0	XXX	XXX
2	Germany	X	XXX	XXX	0
2	The NL	X	XX	XXX	0
3, 6	France	X	0	X	XX
3, 6	Greece	X	0	XX	X
3, 6	Italy	X	XXX	XXX	X
4, 6	Austria	X	X	X	0
4, 6	Switzerland	X	X	X	0
5, 6	Slovakia	0	0	0	0
5, 6	Poland	0	0	X	0
5, 6	Slovenia	0	0	X	0
5	Czech R.	0	0	0	0
5	Latvia	X	XX	X	X
5	Estonia**)	XXX	0	0	X
5, 6	Hungary	X	0	0	0

***) Horses mentioned in one of the problem areas in Estonia

****) Groups = 1: North Scandinavia, 2: Intensive farming, mid-Europe, 3: Mediterranean area, 4: Alpine region, 5: New member countries, 6: Countries with mountain areas

Again, this is a relatively rough estimate, as all types of problems are counted within the same category. Furthermore, some problems go for all animal species, e.g. if there are basically climatic problems connected to outdoor stay either in the winter or the summer, this will most probably cover all animal species. One to three 'X's indicate that problems are reported from one to several times in several areas. If three 'X's are given, it means that problems with the animal specie is mentioned in at least 3 categories. In some countries, the organic production of certain animal species is so limited that there is no experience with it. This is for example the case in Estonia and Slovenia with regard to organic poultry production.

On the other hand, although focusing on problem areas, the partner from Poland emphasised that it should be easy to convert farming to organic farming in Poland, as the animal production systems are generally non-intensive compared with international criteria, and the environment is almost free of chemicals. Furthermore, local breeds are available and popular and at a good genetic level, meaning resistant to diseases, although two main native breeds have been systematically crossed with Holsteins. The partner from Czech Republic also emphasised the use of breeds with high disease resistance in organic farming, and did not mention any problems with the implementation of the EU legislation in the organic farms in Czech Republic. Likewise, the Slovakian partner has not experienced problems with the implementation of the legislation in Slovakia, others than the climatic conditions mentioned in relation to outdoor life.

Disease prevention principles in general

In Box 1 the general principles regarding disease prevention are presented.

Disease prevention principle

5.1. Disease prevention in organic livestock production shall be based on the following principles:

(a) the selection of appropriate breeds or strains of animals

(b) animal husbandry practices encouraging strong resistance to disease and the prevention of infections;

(c) high quality feed, regular exercise and access to pasturage, to encourage the natural immunological defence of the animal;

(d) appropriate density of livestock, thus avoiding overstocking and any resulting animal health problems.

5.2. Animal-health problems should be controlled mainly by prevention

The breeding issues are further addressed in § 3.1, details about feeding are given in § 4, and housing conditions are elaborated in §5.1, 8.1, 8.2, and 8.3 (mammals) as well as 8.4 (poultry). These areas will be treated separately in the following.

The French partner assumes that most farmers are aware of disease prevention practices. They first direct their effort towards finding and eliminating clear and well-known risk factors for diseases in their herds. The fact that the production level is lower than in conventional herds is also a factor leading to decreasing disease level. A number of cases are mentioned, where the organic farming practices are found insufficient to meet the high standards of organic animal husbandry. E.g. the

Austrian partner mentioned poor condition of milking equipment, and problems with endo-parasites in poultry and pigs because of lacking prevention schemes. In Germany, often suboptimal management was found in particular in organic poultry herds. The Greek partner highlighted the general attitude of farmers as a major constraint to achieving this goal. The Swiss partner experienced that organic farmers do not spend more efforts on disease prevention than the conventional colleagues. In the following, prevention measures in terms of breeding, feeding, housing and outdoor life are presented in terms of information given by partners in the questionnaires.

Breeding and availability of breeds and strains

In §3.1 of the EU-legislation the following statements are made regarding breeding: *‘In the choice of breeds account must be taken of the capacity of animals to adapt to local conditions; their vitality, and their resistance to disease. In addition, breeds and strains of animals shall be selected to avoid specific diseases or health problems associated with some breeds or strains used in intensive production (e.g. ...). Preference is to be given to indigenous breeds and strains’.*

Several partners (Austria, Finland, Greece, Estonia, Slovenia, France, Sweden, Netherlands, Switzerland, UK, Denmark, Italy) stated that there is a general problem with breeding programs, because they do not include those traits of animals, which are favoured in organic farming. In some countries, health parameters are part of breeding programs, e.g. in Norway and Denmark. In Switzerland, the first steps have been taken to develop an organic breeding index. The Greek partner added that regarding poultry only hybrids are available for organic herds in Greece. The Greek partner emphasised that the indigenous breeds in Greece are of very low production merit and can be used only for meat production, but the low productivity is primarily a result of lack of proper breeding programs. In Italy, there is only a very limited number of animals of local breeds, and therefore lack of breeding programs as well as sufficient number of animals to improve the breeds. In Slovenia, local breeds are preferred, but they are very limited in number, and farmers are claimed not to have much choice. The French partner mentioned this as a problem especially for goats, sheep, pigs and poultry. Although there is a high number of local dairy cows breeds available, in the main area for milk production, farmers mainly use the Holstein breed. In the Netherlands, the high costs of land and milk quota put high demands on the milk yield, which is then prioritised to relation to other goals in breeding and choice of animals. In Denmark, cross breeding of high milk yielding breeds are more and more frequently practices in organic dairy herds in order to give robust animals.

In Latvia, the chicken come from intensive breeding systems and poultry suitable for organic farming is lacking. In the Netherlands, only very few breeds are available in poultry production, and the differences between farms seem to be bigger than the differences between breeds. In Norway, the minimum of 81 days till slaughter for broiler leads to great risk for bone fractures in the available breeds, indicating that the conventional breeds are not suitable for organic production.

Feeding

In Box 2, the regulation concerning organic feedstuffs and feeding strategies is presented. Problem areas are described and analysed in the following for each of the areas in the regulation.

Box 2. EU legislation concerning feedstuffs in organic livestock production.

Availability of feedstuffs in quantity and quality and adequate formulation of diets

- 4.2. *Livestock must be fed on organically produced feedstuffs.*
- 4.3. *Feed must come from the unit or (...), at least 50% of the feed shall come from the farm unit itself or be produced in cooperation with other organic farms,*
- 4.4. *30 % of the feed formula of rations on average may comprise in-conversion feedstuffs, if from the own holding: up to 60% in dry matter.*
- 4.5. *The feeding of young mammals must be based on natural milk, preferably maternal milk. All mammals must be fed on natural milk for a minimum period, depending on the species concerned: three months for bovines and equidae, 45 days for sheep and goats and 40 days for pigs.*
- 4.7. *Rearing systems for herbivores are to be based on maximum use of pasture according to the availability of pastures. At least 60% of the dry matter in daily rations is to consist of roughage, fresh or dried fodder, or silage. A reduction to 50% for animals in dairy production for a maximum period of three months in early lactation can be permitted*
- 4.8. *Until 24 August 2005 the use of a limited proportion of conventional feedstuffs is authorised where it is unable to obtain feed exclusively from organic production*
- 4.11. *Roughage, fresh or dried fodder, or silage must be added to the daily ration for pigs and poultry.*
- 5.1. *(c) The use of high quality feed, together with regular exercise and access to pasturage, having the effect of encouraging the natural immunological defence of the animal.*

Availability of organic feedstuffs, and 100% organic feeding

The availability of certain organic feedstuffs appears limited in parts of Europe: in the Alpine regions (Austria); in the Mediterranean (Greece) and in some CEE countries (e.g. Slovenia). E.g. in Slovenia, feedstuffs are not produced on the farm and are extremely expensive, which creates problems both in cattle, pig and poultry production. In Greece, a similar problem exists, because until recently the majority of feed stuff has been imported from Italy, Netherlands or France. In Italy on the other hand, there is a lack of production of organic legumes, and the GMO contamination is mentioned as a big problem. The availability is mentioned to be linked to prices, and in some cases also the need for transport of the feed. In specialized Austrian farms (poultry farms are mentioned specifically), organic feed is bought in and the home-grown crops are sold as cash-crops.

The Norwegian partner mentioned fish meal as a previously important protein source in cattle production, which is now lacking.

On the other hand, in France, the use of 100% organic feed is considered to be the basis for organic production and does not cause problems or confusion. Farmers are encouraged to produce their own protein feed and concentrate. However, there are some difficulties in the case of mono-gastric animals.

Mono-gastric animals

In Sweden, diets of mono-gastric animals are claimed to need protein of a higher quality and often are supplemented with maize gluten and potato protein. The Norwegian partner also mentioned the lack of protein sources for mono-gastric animals as a problem, as well as in Germany where the needs of the young stock is mentioned particularly, and where feedstuffs are bought into the farm in order to ensure the supply with proteins.

Use of in-conversion feed

The allowed percentage of feed in conversion used in organic herds was emphasised as an important issue by many partners. In Estonia, conventional feed is often used up to the limit of allowance, which creates a problem when converting to 100% organic feed. A similar problem is mentioned in Slovenia.

Proportion of roughage in the diet

The Greek partner stated the provision of roughage for pigs and poultry as cause of some confusion, because farmers as well as advisors are not used to this and still consider diet formulations as if it was in a conventional practice. In The Netherlands, some poultry farmers do not provide any roughage. In Switzerland, Bio-Suisse requires a feeding ration with 90% roughage for ruminants. The Austrian certification bodies accept the use of straw litter as 'roughage'.

Quality of feed

The quality of feed on organic farms is mentioned as an area of concern in Latvia, due to lack of knowledge and lack of equipment for producing it. In Germany, farmers often do not have their feed analysed, and therefore, appropriate feeding plans are difficult to establish.

Home-grown feed

Producing feed locally is a problem in the Netherlands, where there is shortage of land. This often leads to 'world-wide transports' according to the partner from The Netherlands. In Norway, many farmers cannot produce their own concentrates because of climatic reasons, and they have to buy it. In UK, the national standards do not require home-grown feed at all, and most large scale poultry farms do not produce home-grown feed at all.

Milk feeding and weaning of young animals

The milk feeding of young animals is a special problem area. There is a widespread understanding on the exact meaning of the following: '*The feeding of young mammals must be based on natural milk, preferably maternal milk.*' The Austrian partner asked in the questionnaire whether it shall be defined by percentage dry matter intake. Also the Swiss partner preferred a more precise definition of 'natural milk'.

In Latvia, there is a tradition to wean piglets at 5 weeks, where they are often sold, and this is also practiced in organic herds at times. In Italy, milk powder feeding is allowed in goats herds after dispensation from the authorities and after verified laboratory tests, esp. when some severe infectious health problems exist (e.g. CAEV),. In Germany, there is concern about what to use as replacement for 'natural milk' (understood as milk from the mother) in case of diseased or death of mother animal.

In the case of dairy sheep and goats the economic value of the milk makes it attractive to sell the milk and use milk from cows or artificial milk instead (Austrian partner). The British partners likewise emphasised this as a problem. In France, particularly male animals are weaned earlier than they should according to the organic legislation, namely at 3-4 weeks (lambs) or 2-3 weeks (goats) like in conventional farming. The reason for this is mainly economical.

Housing and indoor conditions including flock life

In Box 3, the EU standards concerning housing conditions are listed. They will be treated in the following both as a descriptive part and analysis across countries.

Box 3. Housing conditions in organic livestock production. Some of the paragraphs mentioned above are specifically addressing mammals, whereas others are addressing poultry.

Appropriate housing conditions

- 5.1. (b) *the application of animal husbandry practices appropriate to the requirements of each species, encouraging strong resistance to disease and the prevention of infections;*
(c) *The use of high quality feed, together with regular exercise and access to pasture, having the effect of encouraging the natural immunological defence of the animal;*
(d) *ensuring an appropriate density of livestock, thus avoiding overstocking and any resulting animal health problems*
- 8.1.1. *Housing conditions for livestock must meet the livestock's biological and ethological needs. The livestock must have easy access to feeding and watering. The building must permit natural ventilation and light to enter.*
- 8.1.2. *Free-range, open-air exercise areas, or open-air runs must, if necessary, provide sufficient protection against rain, wind, sun and extreme temperatures, depending on the local weather conditions and the breed concerned.*
- 8.2.1. *Housing for livestock will not be mandatory in areas with appropriate climatic conditions to enable animals to live outdoors.*
- 8.2.2. *The stocking density in buildings shall provide for the comfort and well being of the animals.*
- 8.2.3. *The minimum surface areas for indoor housing and outdoor exercise areas, and other for different species are laid down in Annex VIII.*
- 8.2.5. *Housing, pens equipment and utensils must be properly cleaned and disinfected. Only the products listed in Part E of Annex II can be used for cleaning and disinfection (...).*
- 8.3.5. *Livestock housing must have smooth, not slippery floors. At least half of the floor area must be solid, that is, not slatted or of grid construction (concerning mammals)*
- 8.3.6. *The housing must be provided with a comfortable, clean and dry laying/ rest area of sufficient size, consisting of a solid construction which is not slatted. Ample dry strewn with litter material must be provided in the rest area. The litter must comprise straw or other suitable natural material. (concerning mammals)*
- 8.4.1. *Poultry must be reared in open-range conditions and cannot be kept in cages.*
- 8.4.3. *Buildings for all poultry must meet the following minimum conditions: at least one third shall be solid, that is, not of slatted or of grid construction, and covered with a litter material such as straw, wood shavings, sand or turf;(concerning poultry)*
- 8.4.6. *For health reasons, buildings must be emptied of livestock between each batch of poultry reared. The buildings and fittings are to be cleaned and disinfected during this time. Between batches, runs must be left empty to allow vegetation to grow back, and for health reasons. These requirements shall not apply to small numbers of poultry in runs (concerning poultry).*

Use of tied stall systems and old buildings

According to the paragraphs 6.1.4. and 6.1.5 'Keeping livestock tethered is forbidden. Nevertheless, this practice can be authorised for individual animals if this is necessary for safety or welfare reasons, and that such tethering is only for a limited period of time' and (...) cattle can be tethered in buildings already existing before 24 August 2000, provided that regular exercise is provided and rearing takes place in line with animal welfare requirements (...) transitional period expiring on 31.12 2010.

Tied housing systems are extendedly carried out in some mountain or disadvantaged areas with mainly grassland and an small average herd size in dairy production, such as Austria, Finland, Poland, Estonia, France especially in the mountain areas, Switzerland, and Germany (29% of farms 2004)). Specifically for sows, it is stated in § 8.3.8 that *‘sows must be kept in groups, except in the last stages of pregnancy and during the suckling period. Piglets may not be kept on flat decks or in piglet cages. Exercise areas must permit dunging and rooting by the animals’*.

The fact that sows are still tethered was reported from Austria and with respect to calves from Estonia, in some production systems. The use of tied stalls is traditional and is often characterised by old buildings. The Norwegian partner furthermore explained that changing the old traditional tied stall systems to loose housing systems in herds with 15 cows is so expensive that it is practically impossible, although it has to be done in 2024 at the latest. Cows are kept in the traditional tie stall systems with access to exercise areas, and pasture as long as the climate makes it possible.

The Latvian partner wrote that many old traditional housing systems do not give free access to water for the animals, and this is a question of economy. The Swiss, Austrian and the Polish partners further mentions that the traditional barns in their country are limited with regard to light and fresh air, and that many old buildings have slippery floor. In the Netherlands, also many modern deep litter stables are built without access to daylight. The Finnish partner also mentioned slippery floor as a problem in many organic herds.

In Sweden, there are some loose housing systems with cubicles, which give allowance of only 3 m² of solid floor per cow. The Slovenian partner responded that many stables are not yet appropriate and need to be improved in order to meet the organic demands, but it is a problem of costs. The Finnish partner mentioned that in the case of new buildings for farm animals, there is a lack of information on the cost-benefit of increasing the good animal welfare level, and that changing old buildings or re-building is extremely costly. Furthermore, the natural needs of animals in relation to the EU-rule about *‘housing conditions for livestock must meet the livestock’s biological and ethological needs’* are not met according to the Finnish and Estonian partner, and very often space is relatively limited.

Slatted floors and lack of litter material

In Norway, the sheep farmers have to build new stables or reduce the herd sizes, because the organic rules require bigger indoor areas than traditionally used in Norway. Furthermore, many farms in Norway have slatted floors, which need to be rebuilt.

In Scotland, small scale crofters and farmers keep stock indoor for up to 6 months of the year on full slatted floors in loose housing systems. There is no straw available in the area, and it is expensive to import straw. In some cases, straw is imported for beef cattle in tethering systems, but not for sheep.

In some areas of Europe, straw is not available or very limited, e.g. in Norway, Italy, the Alpine and mountain areas, and in Slovenia, where some farms are small and placed in peri-urban areas with no real crop production. This means that farmers use little or no litter for their animals.

In Latvia, individual housing of calves is recommended as the best way of preventing diseases, and they will not recommend that calves can only be housed in individual boxes for two weeks. In France, it is normally recommended as a good practice to keep calves individually housed for at least 3 weeks in order to prevent diseases. In the Netherlands, most calves are also housed in individual small pens. The French partner emphasised that sows in heat or early pregnancy can be very aggressive and therefore it is difficult to keep them in groups.

Flock life and flock size

In paragraph 6.1.8 of the EU standards, it says: *‘Where livestock are reared in groups, the size of the group must be adequate. The keeping of livestock in conditions or on a diet, which may encourage anaemia, is prohibited’* .

Animals are supposed to be kept in flocks, but in some herds, very few animals are kept so that it is simply impossible to form flocks, e.g. of calves or young animals without providing huge differences in the age within the group. This may mean that calves are kept in individual boxes, despite the fact that it is explicitly mentioned in the Directive 91/629 EEC and in § 8.3.7 of the EU Regulation 2092/91 that *‘The housing of calves in individual boxes is forbidden after the age of one week’*. In Sweden, this is solved by demanding larger boxes for individual calves. In Switzerland, there might be only one sow in some herds, and one animal cannot be kept ‘in a flock’.

On the other hand, the acceptable size of a flock is not specified (see box 3). The Greek partner e.g. asked: ‘What is the appropriate size of a group?’ In Denmark, the flock sizes are big. Nevertheless, and more knowledge on how to use grazing areas are demanded.

The EU standards further states in § 8.2.2 that *‘The stocking density in buildings shall provide for the comfort and well being of the animals (...). It shall also account on the behavioural needs of the animals (...). The optimum density (...) provides sufficient space to stand naturally, lie down easily, turn around, groom themselves, assume all natural postures and make all natural movements’*.

The Finnish partner mentioned that it is not a problem to keep the minimum area required for organic animals, but it is difficult to make smaller flocks or lower the stocking density to a level, where the animals are able to create and maintain a hierarchy in the flock, because that demands limited flocks, and buildings are claimed expensive in the North. In Sweden, there are no specific rules for density of livestock, but it is regulated through rules about the input of phosphorus per hectare. In UK, the high poultry stocking density is expected to end up earlier than in 2010 (for producers, who started before 1999) as stated in the EU regulation.

Housing and flock size issues for poultry

In the EU regulation § 8.4.3, *‘Buildings for all poultry must meet (...) minimum conditions: (...) at least on third shall be solid (...), they must have perches of a size and number commensurate with the size of the group and of the birds; they must have entry/ exit pop-holes of a size adequate for the birds’*. Furthermore, according to § 8.4.4 *‘In the case of laying hens natural light may be supplemented by artificial means to provide a maximum of 16 hours light per day with a continuous nocturnal rest period without artificial light of at least eight hours’*.

Referring to the answers to the questionnaires, poultry is one of the biggest problem areas for organic livestock farming. Problems need to be solved not only with regard to lack of appropriate breeds in many countries, and feeding of low protein diets, but also regarding housing and flock size. In UK, a limit for number of animals per house in poultry farms is demanded but not yet defined. The flock sizes are big in poultry herds in Denmark, and recommendations and more knowledge on how to use grazing and outdoor areas is needed. In The Netherlands, some poultry farmers do not provide litter material to their poultry because they are afraid of mislaid eggs, and in Germany it was also a frequent finding to see poultry herds without litter, and with no access to areas for dust bathing. The amount of litter material will gradually be supplemented, but it takes some weeks before there is enough to make it possible for the poultry to perform natural foraging behaviour. This can lead to feather pecking. In UK, the rule about light management is suggested to give problems, if pullets are kept in these systems till the start of lay. More partners mentioned that

even though the minimum area can be established, it is difficult to make smaller flocks or lower the stocking density. In poultry, where the flocks will always tend to be big, this is a specific issue.

Outdoor life

Box 4 presents EU regulations concerning out-door life in cases of mammals as well as poultry. In the following, issues about outdoor life will be described and analysed.

Box 4. Outdoor life is a special issue which is emphasised for all types of organic livestock production, and which is an area where organic production clearly distinguishes itself from conventional livestock production.

Out-door life

8.3.1. (...) all mammals must have access to pasturage or an open-air exercise area or open air run, which may be partially covered, and they must be able to use those areas whenever (...) possible. Unless there are Community or National requirements relating to specific animal health problems that prevent this. Herbivores must have access to pasture whenever conditions allow.

8.3.2. In cases where herbivores have access to pasturage during the grazing period and where the winter-housing system gives freedom of movement to the animals, the obligation to provide open-air exercise areas (...) during the winter months may be waived.

8.3.3. (...) bulls over one year old must have access to pasturage or an open-air exercise area or an open-air run.

8.3.4. (...) the final fattening phase of cattle, pigs and sheep for meat production may take place indoors (...).

8.4.2. Water fowl must have access to a stream, pond or lake whenever the weather conditions permit.

8.4.5. Poultry must have access to an open-air run whenever the weather conditions permit and, whenever possible, must have such access for at least one third of their life. These open-air runs must be mainly covered with vegetation be provided with protective facilities and permit animals to have easy access to adequate numbers of drinking and feeding troughs.

Limited grazing and outdoor life because of climate

In some areas of Europe, such as Sweden and Norway and the Alpines or other mountain areas, there are limitations for outdoor life during a long period of the year. In the winter, it is nearly impossible because of snow, and in the summer because of heavy rainfalls. In Italy, the heavy clay soil will make outdoor stay difficult during winter in many places. The Latvian partner informed that during the winter months, many farmers cannot give their animals access to outdoor exercise areas because they do not have suitable space for this. The Slovenian partner wrote that it is a general problem to give the animals outdoor areas, because there are no suitable areas close to the stable, and furthermore there are many farms placed in peri-urban areas with limited amount of outdoor areas. The Slovakian partner mentioned that the climatic conditions in Slovakia generally support emphasis on appropriate protection on outdoor areas. During winter in UK, the pop holes are reported to cause problems with temperature maintenance, but in some housing designs, the problems seem solved. The Greek and Italian partners emphasised that during the summer, the temperature is often too high to keep animals outdoor. In hot climate, there will not be a problem if the outdoor areas are provided with shade and access to fresh water.

For traditional reasons, lambs in the mountain areas are often kept in-door during their whole suckling and fattening period. So far, the consumers are not aware or ignore this. But in general,

farmers in France are claimed to be aware of the benefits of keeping animals outdoor, and will try to make it work, even under difficult conditions. Pigs are often fattened outdoor in France.

Tethered animals on grass

In Poland and Latvia, grazing cattle are often kept tethered because of lack of equipment for keeping them free ranging, e.g. electric wires and other fencing systems.

Access or lack of access to open-air run

In The Netherlands, prices on land are so high that the density of animals generally is very high. In Germany, a survey in 2004 found 40% dairy herds, 77% sow herds and over 50% of the fattening herds in organic farming had an open-air run. In The Netherlands as well as in other North-Western European countries, there are out-door runs, which are partly covered by roof, but which are unattractive to the animals because of wind, rain and no possibilities for activities like e.g. rooting. In Finland, the availability of pasture can also be problematic for big herds, but there are not so many of these herds, and only in some limited areas. The Estonian partner reported about experiences with old 'Soviet-time-buildings', where it is very difficult to build open-air exercise areas to the big flocks in those herds. In Estonia, a general lack of knowledge on grazing management is mentioned, and in the coast areas, cattle graze the same areas every day all year round.

Bulls in out-door systems

As mentioned in the standards, bulls should have access at least to an open-air run. In France, bulls for natural breeding are kept out-door with beef cattle. The partners from Poland and Estonia claimed that bulls are normally considered so dangerous that this will be practically impossible to convince farmers to take this risk. In Norway, the rules make an exception for bulls from access to pasture, if the bulls can cause danger.

Extensive grazing systems

In Norway, sheep are sometimes kept in the mountain areas and have no contact with humans for days. If they get injured or hurt, it may take days before they are found by humans.

Land-use issues challenging grassland management

Many organic farming systems in Europe use common land areas, as mentioned e.g. by the Italian partners. In Italy, the organic animals are not allowed to graze together with conventional animals. In Italy, the animals are sometimes kept on other farms than those, where the land is, especially the sheep.

The outdoor run of the poultry

In Germany, it was found in 2004 that a third of the poultry herds did not have access to outdoor areas. In UK, many poultry flocks are not given access or do not use the outdoor areas. The British saw flock size and using the wrong breeds as the main reasons for poor animal welfare in poultry flocks.

The Swedish partner emphasised that the demand about outdoor poultry area, which should give easy access to sufficient drinking and feeding troughs, will attract wild animals.

Poultry is often kept in accordance with the regulation, but in large flocks. At the same time, the outdoor runs, which are constructed, are not always attractive to the poultry. Poultry often are not been accustomed to use it, because the farmers often avoid giving them access to the areas as they perceive the weather conditions to be too bad (rainy and muddy surfaces of the outdoor run). In UK,

in-door rearing of pullets for organic farming may cause problems when suddenly given access to outdoor areas.

The maintenance of the vegetation is a problem especially in the cases of big flocks, like laying hens with more than 1000 birds per flock. The Swiss partner wrote that generally it is a problem to keep vegetation in laying hen runs. Likewise, shelters to protect the birds in outdoor areas are often missing in Austria.

In UK, it is recommended that all outdoor areas have a rest period of at least 2 months per year. This is, however, seen by ADAS poultry experts as inadequate to allow re-growth of vegetation and to avoid parasite and pathogen accumulation. The Greek partner mentioned the building-up of a parasite burden on pasture as a problem especially in poultry flocks.

In France, about 40% of the conventional chicken production is taking place in free range systems, and therefore much experience is available also for free range systems used in organic farming. In organic egg and chicken systems, there is access to outdoor areas all year round. In contrast, there is lack of knowledge about good outdoor areas for pigs and poultry in Finland.

It is mentioned in relation to water fowl that they should have access to a stream, pond or lake whenever the weather conditions permit. According to the Austrian and Finnish partner, this is expected to cause problems due to poor hygiene. In The Netherlands, farmed ducks are not allowed in open water anymore, so there are no possibilities to have organic ducks in the Netherlands.

Disease treatments

Box 5. In organic livestock farming, emphasis is put on health promotion and prevention of disease. Restrictions are therefore put on treatment for two reasons: in order to encourage measures and practices, which improves animal welfare through prevention of the occurrence of disease, and in order to minimise the use of chemicals (in terms of medicine), which are allowed in the animal production as the only area of the organic farm.

Treatment of diseased animals

- 5.3 *If an animal becomes sick or injured, it must be treated immediately, if necessary in isolation and in suitable housing*
- 5.4. *The use of veterinary medicinal products in organic farming shall comply with the following principles:*
- (a) Phytotherapeutic, homeopathic products and trace elements and products shall be used in preference to chemically-synthesised allopathic veterinary medicinal products or antibiotics, provided that their therapeutic effect is effective for the species of animal and the condition for which the treatment is intended;*
 - (b) If the use of the above products should not prove, or is unlikely to be effective in combating illness or injury, and treatment is essential to avoid suffering or distress to the animal, chemically-synthesised allopathic veterinary medicinal products or antibiotics may be used under the responsibility of a veterinarian;*
 - (c) The use of chemically-synthesised allopathic veterinary medicinal products or antibiotics for preventive treatment is forbidden.*
- 5.5. *(b) veterinary treatments to animals, or treatments to buildings, equipment and facilities which are compulsory under national or Community legislation shall be authorised (...) when a disease has been recognized (...).*

Homoeopathy, phytotherapy and alternative treatment methods

A number of partners (Austrian, Poland, Latvia, Slovenia, Netherlands, Switzerland, UK, Denmark) stated lack of knowledge about alternative treatment methods as a problem for organic farming, and that the veterinarians often use allopathic medicine. A German study showed that 46% farmers prefer homoeopathic treatment and 10% of veterinarians are able to use it. In Italy, homeopathy and phytotherapy are rather popular treatment methods among organic farmers, but there is a lack of official acknowledgement of these methods even for humans (although 10% of the people use them).

In Sweden, veterinarians are not allowed to use or recommend homoeopathy or other alternative methods by law. In Norway, the use of homoeopathy and phytotherapy is formulated as a recommendation rather than a rule, and there is generally not much knowledge about it among veterinarians. In Norway, human homoeopaths or farmers treat animals themselves using homoeopathy. Little contact to veterinarians exists, although the law states that this should be done in collaboration with a vet. In Denmark, there has been a severe problem using homoeopathy and phytotherapy over the past few years, because it is stated in the Danish version of the rules that the remedies have to be legal. However, homoeopathic remedies are not legal per definition because no system for registration of homoeopathic remedies in veterinary medicine existed when the registration procedure of the human homoeopathic medicines was implemented. In Hungary, only 14 homoeopathic complex and no single remedies are registered, which is a big problem. In Hungary, a 3 year post-graduate course in homoeopathy is well-established, including examinations following international rules.

In France, farmers generally prefer the use of non-chemical therapy, and they are willing to 'test' it, and have some knowledge on it. The French partner, however, mentioned that some farmers spend quite much money on these products.

The Finnish partner raised a question about who can decide whether alternative methods work or not, and why the precautionary principle is not used in the case of alternative medicine. Partners of Greece and The Netherlands likewise mentioned the lack of reliable alternatives as a constraint to good animal health in organic herds, and so far the effect of the existing phytotherapeutic and homoeopathic products have not been proven scientifically.

In Poland the preferred homoeopathic products were in the process of legalisation when the response was given to the questionnaire.

In Estonia and Latvia, there has been no tradition for using neither homoeopathy nor phytotherapy. Correspondingly, there are practically no available products on the market, and there seems to be no market for it which decreases the relevance of starting import.

Prolonged withdrawal after medical treatment

The withdrawal time after treatment was only claimed to be a problem by few partners, and it is even longer in some countries like Sweden and Denmark. At the same time, it is claimed to be a problem in Denmark when fattening pigs need disease treatment, because in many cases, the normal age for slaughter is reached before the withdrawal time is over. In Norway, however, some products with a very long legal withdrawal time are not used in organic herds, because the withdrawal time will then be extremely long, and this can cause problems. In Germany, the problem of dry cow therapy is stressed as some forms of clinical mastitis can only be cured successfully if long-efficient antibiotics are used. In the legislation, it is mentioned that the withdrawal period has to be double the legal withdrawal period, and if not specified: 48 hours. The last part of the sentence – the 48 hours rule – is not used in practice in Switzerland, according to the Swiss partner.

Medical treatment for other purposes than disease treatments

The Austrian and Latvian partners stated that veterinarians tend to use allopathic remedies also for prevention purposes, if a farmer claims to have a certain disease history in the farm. In Latvia, organic farmers may use allopathic drugs (including de-worming) for prevention purposes, but only because of lacking knowledge about that this is prohibited. The partner from The Netherlands furthermore argued that the use of dry-cow therapy at drying-off (preventive use) in some cases may reduce the use of antibiotics later in the following lactation.

In Greece, the farmers and their advisors feel that there is a problem with the rule that hormones in relation to oestrus synchronisation cannot be used, as this is common practice in some farms.

In Italy, there is a question about the use of medicated conventional feed. It is not clearly prohibited in the organic farms, and yet, many certification bodies consider this practice a preventive use of chemicals. Besides, these feed stuffs often contain not admitted components and the animals fed this have to start conversion again.

Difficult distinction between treatment and prevention

The Finnish partner found it difficult to make a clear distinction between prevention and treatment in cases like endo-parasites or subclinical mastitis, where faecal egg counts and somatic cell counts, respectively, are used as indicators of disease that may not be clinically manifest. In Norway, a distinction is made between anti-parasitic treatment and other allopathic treatments, so that anti-parasitic treatment can be carried through for prevention purposes.

The British partners found that clear basis for use of vaccine is lacking. In Greece, it is mentioned as a problem that farmers avoid or delay treatment when having diseased animals, because they are afraid to lose the status as organic farmers.

Use of veterinary medicine without involving veterinarians

In the Netherlands, farmers can without problems use veterinary medicine without contact with a veterinarian in conventional farms, which can lead to illegal use in organic farms, as organic farmers can also buy veterinary medicine. In Denmark, veterinarians have to be involved in all disease treatment cases, which sometimes may lead to reluctance to treat diseased animals, esp. calves, because a veterinary call is more expensive than the calf itself.

More than two treatments per production cycle

The Swiss partner stated that it is difficult to define what 'one treatment' is, and the British partners also raised concern that this rule can be mis-interpreted. The Swedish partner answered that the allowed two treatments per lactation or production cycle is hard to keep for some producers, and some individual animals may need more. In Estonia, organic horses are sometimes treated with allopathic remedies up to six times. In The Netherlands, it is argued against the limitation to two times treatment, because in some cases, more than two treatments may be needed, and then the farmers have three options: 1) no treatments and the animal suffers, 2) treatment and loss of income because of loss of organic status on some level or 3) treatment with fraud. De-worming sometimes take place 3 times per year, and the drug companies recommend this to take place every 8th week.

Lack of data about treatments

Treatment data is generally not available in Germany, which makes it impossible to evaluate whether disease treatments have worked efficiently as intended. This makes control and certification difficult. E.g. there is not documentation that veterinary medicine is used for treatment rather than prevention purposes, or to document that the withdrawal time (twice the legal) is kept.

National programmes of disease treatments

In the EU legislation, *compulsory treatments of animals or their buildings in relation to national or Community legislation must be authorised when a disease has been recognised*. According to the Greek partner, this is ignored in Greece.

Animal welfare and promotion of health

Mutilations

According to § 6.1.2 ‘operations such as attaching elastic bands to the tail of sheep, tail docking, cutting of teeth, trimming of beaks and dehorning must not be carried out systematically in organic farming’, and 6.1.3: ‘Physical castration is allowed in order to maintain the quality of products and traditional production practices (...) but only under conditions set out in the last sentence of 6.1.2’, mutilations are generally prohibited in organic livestock farming.

The mutilation and operation aspects are problematic in a number of countries. Dehorning is practiced widely, especially in loose housing systems, all over Europe. The partner from The Netherlands emphasised the need for more space for horned cattle. In Greece and France, e.g. Limousines are preferred dehorned because they are expected to be aggressive in the presence of their calves.

In many countries (e.g. Germany, Poland and Denmark), it is common practice to castrate male pigs at an early age. In France, it is common practice to castrate males in beef herds at an age of 9-10 months (at weaning), and in UK male sheep. In Estonia, it is allowed to castrate horses as a part of the ‘traditional production practices’ (§ 6.1.2).

Another mutilation mentioned is tail docking in sheep (Austria, Greece, Estonia, Latvia, France, Italy especially in the female sheep). The Latvian partner argued that this is better for the health of the sheep.

In Germany, herds with beak trimming practices and pig herds with teeth cutting were still found in 2004. In UK, the issue of beak trimming is also reported to be not sufficiently emphasised, and is often impossible in cases where organically reared pullets are not available. In an un-published survey, 90% of the layers were found beak trimmed.

Animal welfare promotion in general is farmer dependent

The partner from The Netherlands mentioned that very many practices are dependent on the farmer, his/her choices and perception e.g. of the weather, the needs of the animals, how clean and hygienic the surroundings should be, and whether to maintain to do things in a traditional way, and that there are big differences between farmers. The German partners argued in the same direction, and emphasised that the level of management generally is poor in pig and poultry herds.

Health plan systems

In UK, a health plan is mandatory for organic farms, but the British partners stated that the animal health plan should be better followed up and documented, e.g. that it is actually also having a practical importance in the herds. Furthermore it is recommended that the certification bodies specifically should monitor changes during conversion. In UK, a welfare assessment is being formalised to use also for farmers as a management tool.

Education of farmers

The Austrian partner stated that many farmers lack knowledge about the needs of animals, e.g. in terms of shelter for free range animals. Other partners mentioned that there is a general need to educate farmers as well as advisors in good management practices, as well as to develop new ones.

In UK, farmers often stop disease treatment practices before prevention practices are well in place, which calls for better education and training in the conversion process.

Education of animal health professionals and advisors

Almost all respondents to the questionnaire pointed to the fact that veterinarians in their country lack knowledge about organic farming, prevention practices and/or alternative ways of handling disease, e.g. the use of alternative treatment. The Finnish partner mentioned that in the case of new buildings for farm animals, architects often do not know what good living conditions for the animals are, and that the team-work between advisors of different professions does not always work.

The partner from The Netherlands claimed that the farmers in most cases know the appropriate management strategies, but only start acting when a problem occurs, partly because of costs. In Slovenia, veterinarians are not familiar with the organic rules, and do not know about the practices nor the treatment methods wanted in organic farming systems. In addition, there is lack emphasis on prevention practices. According to the Slovenian partner, the farmers are the ones to explain veterinarians about what to do on organic farms. In Italy, there are many courses for veterinarians and advisors about organic farming, but still they are far from being good sparring partners for organic farmers. In Estonia, there is a general lack of knowledge among farmers and their advisors about appropriate animal husbandry practices and grazing management. The Estonian partner also mentioned that many farmers do not see the purpose of shelters on out-door areas (which is here interpreted as lack of education or knowledge). In Switzerland, the lack of educated veterinarians in relation to complementary therapy methods is listed as a problem area.

The Greek partner emphasised the lack of knowledge on appropriate disease prevention among animal health professionals, and general support from veterinarians.

Transport

Transport should, according to the EU legislation (§ 6.2.1): *‘Transport of livestock must be carried out so as to limit the stress suffered by the animals (...). Loading and unloading must be carried out with caution and without the use of any type of electrical stimulation to coerce the animals. The use of allopathic tranquillisers (---) is prohibited’*. This can be taken care of in the farm as long as it is transport e.g. to remote grazing areas, but in the case of transportation to the slaughter houses, farmers have no or very limited influence on how the animals are loaded, and even less when unloading in front of the abattoir. In Greece, there is a severe lack of good vehicles for transport of animals. In Norway, the transport time must be limited to 6 hours.

Food safety issues

Box 6. The food safety directly addressed through EU-legislation restricting the use of any substance which potentially could increase the risk of residues in the organic animal products.

Food safety issues

Introduction to the regulation.

Whereas the procedures laid down make possible, if this appears necessary, the addition to Annex I of more specific provisions aimed at avoiding the presence of certain residues of synthetic chemicals from sources other than agriculture (environmental contamination) in the products obtained by such production methods.

4.1.7. (...) Antibiotics, coccidiostats, medical substances, growth promoters or any other substance intended to stimulate growth or production shall not be used in animal feeding.

5.4. (c) The use of chemically-synthesised allopathic veterinary medicinal products or antibiotics for preventive treatment is forbidden.

5.5. In addition to the above principles, the following rules apply:

(a) the use of substances to promote growth or production and the use of hormones or similar substances to control reproduction, or for other purposes, is prohibited. Hormones may be administered to an individual animal as a therapeutic veterinary treatment, (b) veterinary treatments to animals, or treatments to buildings, equipment and facilities which are compulsory under national or Community legislation shall be authorised (...) when a disease has been recognized (...).

5.7. *The withdrawal period is to be twice the legal withdrawal period or, in case in which the period is not specified, 48 hours.*

5.8. *With the exception of vaccinations, treatments for parasites and any compulsory eradication schemes established by Member States, where an animal or group receive more than two or a maximum of three courses of treatments with chemically-synthesised allopathic veterinary medicinal products or antibiotics within one year (or more than one course of treatment if their productive life cycle is less than one year) the livestock concerned or produce derived from them, may not be sold as being products produced in accordance with this Regulation (...).*

In table 1, it has been indicated that a number of partners have reported problems with food safety issues. The problems mainly reported concern treatment practices, with a potential problem of residues. Otherwise, no responders raised specific food safety issues in relation to organic farming development.

Unspecific formulations

Some terms are claimed to be very unspecific and need further definition, such as ‘regular exercise’, ‘qualified personnel’, ‘appropriate breeds’ and ‘suitable age’. The Estonian and Latvian partners mentioned that no exact parameters are given in relation to ventilation and light, which makes it difficult to evaluate. The Latvian partner asked: ‘What is the final fattening phase of cattle, pigs and sheep for meat production?’ The Latvian partner emphasised that appropriate disinfection for milking equipment has to be used, and based on the legislation, it is not clear whether this is allowed, because some of these disinfectants contain sulphuric acids. The list of allowed substances to use in organic farming is criticised by the Swedish partner, who claimed that it does not cover very well the appropriate areas of need. More partners claimed a more clear definition of a ‘treatment course’. The British partners called for better definitions and rules on the bio-security area.

Examples of additional or more detailed national rules for organic livestock production

In Greece, a number of rules are giving further details or are additional to the EU legislation compared to the EU regulations:

- Herbivores: at least 70% of the total dry mater intake per day must be roughage during the normal period and 60% during lactation or fattening.
- Herbivores: grass silage is limited to 50% of the total DM intake per day, only 33% with maize silage.
- Table birds must be at least 81days before being slaughtered.
- Pigs must be at least 182 days before being slaughtered.
- Slatted floor is allowed on a part of floors in old buildings until 2010.
- The maximum pig production on a farm is 1500 pigs or 200 sows.
- The size of the poultry building is 400 m² on a farm. When the size of a poultry building is more than 200m² it must divided in two independent parts.

In Sweden, there is a longer withdrawal period for organic wool, meat and hides (6 months). Indoor fattening during the grazing season is not allowed, and the use of avermectines is prohibited.

In The Netherlands, veterinarians have regular inspection visits on organic dairy farms.

In Norway, apart from the above mentioned, there are the following additional rules:

- Feeding milk derived from the withdrawal time of a cow to calves is restricted (or forbidden?).
- Calves must suckle their mother during a minimum of 3 days after birth.

In Italy, the use of antiparasitic drugs with a withdrawal period longer than 10 days is restricted.

DISCUSSION

Data and choice of analysis

Obviously, this type of data material calls for a qualitative rather than a statistical analysis. We are confident that our data material (the answers to the questionnaires from 17 countries) cover well the problem areas existing in EU in relation to the implementation of the standards, but we are aware that the partners from each country have different background and focus area, and that problems mentioned in some countries may exist in another country. They may not have been mentioned in the questionnaire simply because the partner and the national reviewers of the answers are not aware or do not consider this as a problem. The relative size of a problem likewise will inevitably be influenced by what you are used to see. In one country, organic farms seem to have a higher level of hygiene than on conventional farms, and therefore judged 'good', where comparing these farms to organic farms in another country may result in judging these farms very poor with regard to hygiene status, because the farms in the other country were so much better. Another example is dehorning of cattle, which is taking place in many countries. In some countries, dehorning is reported to be a problem of the responders to the questionnaire because they see it as a problem that organic farmers dehorn cattle, in other countries it is viewed as a problem that the standards say that systematic dehorning must not take place. In other countries, this conflict between the standards and the daily practice is not seen as a problem and will maybe first be recognized by this group when reading the answers from other countries.

The length of the period with EU legislation clearly influences the experience with and therefore the perception of problems with the implementation. This will be one of the main explanations for the difference between many answers from the new member countries and the pre-accession countries not having experienced any problems with the implementation of the EU legislation.

Three different problem areas identified

Basically, three main types of problems and challenges are identified in this study:

- 1) Problems and challenges related to the current status, practices and way of farming. These are problems that can be solved and challenges that can be met in a dialogue between organic farmers, organisations, certification bodies, governments etc. on national level in order to improve the situation. This can be e.g. the presence of old buildings, lack of education, poor hygiene, various results of the farming culture like non-outdoor traditions, market conditions etc..
- 2) Problems and challenges linked to the diversity between countries, national and regional characteristics like climate, which have to be dealt with when making regulations.
- 3) Problems and challenges, which can be met on EU level through formulation of the standards, clearer definitions, guide lines, and specifications.

The first group is far the biggest, and all three groups will be addressed in the following. In Table 3, an overview of the problem areas is given.

In the following, the problem areas will therefore be shortly discussed and concluded upon under three headings indicating the types of problems and challenges. After this, recommendations will be given with regard to the EU regulations as follows:

- 1) Formulation and precision of the EU regulation
- 2) Support to implement the EU regulation under diverse conditions
- 3) Areas needing further confirmation and/or clarification

Table 3. Overview over problem areas mentioned by responders to the questionnaire in 17 countries.

Group	Country	Farm management practices											Diverse living conditions			
		Old buildings (floor; tied stall)	Poor farmer practices; farmers lack knowledge	Feed stuff available / expensive		Lack of breeds or breeding programme	Lack of educated veterinarians	Dehorning	Tail docking	Treatment practices (prevention+ routine) & data	Exercise area & flock,		Scarce land / lack of land to farm or in general	Feed stuff (lack; roughage; home-grown feed)	Climatic conditions	
				Dairy / ruminants	Pigs and/or poultry						Poultry	Other species			Lack of straw	Cold/hot outdoor stay
1	Sweden	X	0	0	X	X	X	0	0	(X)	0	0	0	0	0	X
1, 6	Norw.	X	0	X	0	X	X	X	0	0	0	0	0	0	X	X
1	Finland	X	X	0	0	X	X	0	0	(X)	X	X	0	0	?	?
2	Denm.	0	0	0	X	X	X	X	0	0	X	0	0	0	0	0
2	UK	0	0	0	X	X	X	X	X	X	X	0	0	X	X	0
2	Germa	X	X	0	X	X	X	X	0	X	X	X	0	0	0	0
2	The NL	X	X	X	X	X	X	(X)	0	X	X	X	X	X	0	0
3, 6	France	X	0	0	0	X	0	X	0	0	0	X	0	0	0	0
3, 6	Greece	0	X	X	X	X	0	X	X	X	0	0	0	X	0	X
3, 6	Italy	X	0	0	X	X	X	X	X	X	X	X	0	0	X	X
4, 6	Austria	X	X	X	X	X	X	X	0	0	0	0	0	0	X	X
4, 6	Switz.	X	X	0	0	X	X	X	0	0	X	0	0	0	X	X
5, 6	Slovak.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5, 6	Poland	X	0	0	0	0	X	0	0	0	X	0	0	0	0	0
5, 6	Sloven.	X	0	X	X	X	X	0	0	0	X	X	X	0	0	0
5	Czech	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Latvia	X	0	X	X	X	0	0	X	X	X	X	0	0	0	0
5	Estonia	X	X	X	0	X	0	0	X	X	X	X	0	0	X	0
5, 6	Hunga.	X	X	X	X	0	0	0	0	0	0	0	0	X	0	0

Problems and challenges related to the current status, practices and way of farming

A majority of the problems mentioned are linked to insufficient farming practices and routines, which are not yet developed in order to meet the level of animal health and welfare, which are wanted and claimed existing in organic livestock production. E.g. poultry is mentioned as a major problem area in many countries, especially the countries with the intensive animal production systems, to a very large extent as a result of the conflict between existing large scale production units and the organic production method with emphasis on animal welfare in terms of group life, possibilities for outdoor access, organic feeding, and need for breeds suitable for these conditions. These problems obviously cannot be expected solved by changing the rules, but by developing farming practices. This development gives at least two challenges:

- 1) Problems must be solved in accordance with the existing living conditions and context. This demands a thorough insight into the principles and goals of organic farming and, at the same

time, an ability to analyse the existing framework for animal production. By combining these two types of knowledge and insight, solutions can be found locally.

- 2) In some regions, organic farming is not well developed, and little experience exists among farmers as well as their advisors. Several partners mentioned the lack of training and knowledge among farmers, advisors and veterinarians about organic animal husbandry and farming as a severe obstacle for reaching a satisfying level of animal health and welfare in organic herds.

Breeding and breeding goals

Preference is given to indigenous or local breeds and strains. In most North Western European countries, this is difficult, as big breeding companies have dominated the market for decades and few breeds and strains are now available. Indigenous breeds are generally lower in their performance capacity. Therefore farmers using indigenous breeds seldom are competitive with farmer using conventional strains, except for some specific brand label programmes. This must be included in the discussion about what to prioritise.

In parts of Medi-terranean and Eastern European countries, there still is more tradition for and emphasis on the use of indigenous breeds. Seen from an animal health point of view, the emphasis on the indigenous breeds makes sense, because the ability to adapt to local conditions will be better with a long history of gradual adaptation and adjustments of capacities. The implementation of this part of the EU-legislation needs support from organisations and breeding companies, and can be supported on EU level through support to research, development and networking.

Lack of knowledge and suitable practices: Need for network and education

Many of the responses from SAFO participants reflect a more or less severe lack of knowledge about farming practices suitable for organic livestock production. In some cases the knowledge does not exist, or it has to be adjusted and re-thought into special geographical, climatic or other conditions. In other cases, much knowledge could be exchanged between countries or areas, e.g. when some countries mention lack of knowledge about outdoor areas for pigs as a problem, where other countries have experiences and knowledge to share in this area. Some problem areas which were mentioned by questionnaire responders can fall into this category, e.g. quality of feed, how to make outdoor areas, improve hygiene, keep an acceptable reproduction level, and introducing group housing. Forming networks, exchanging knowledge, and adjusting or developing experiences from other countries to national conditions will probably solve most such problems. This can be supported on EU level through support and facilitation of networks, education and national facilitation of the EU regulations.

Animal disease treatments

Some of the questionnaire responders expressed confusion with regard to disease treatment issues. Some of these things can be solved in the regulation, such as consistency between directives concerning homoeopathic disease treatments. Others can be improved by clearer formulation, e.g. clear guidelines regarding use of medicine and vaccines. Left are the cases where individual judgement is the only way to relevant action. In particular, the distinction between prevention and disease treatment can be difficult, e.g. in cases of endoparasite infections or subclinical diseases. Cases of clinical as well as sub-clinical diseases are nevertheless individual decisions based on an analysis of the situation, and not possible to make general rules for. The choice of treatment should be left open for the involved veterinarian in collaboration with the farmer, although alternative treatment is encouraged. More of the responders mention that knowledge and education in alternative treatment methods are generally small in their country, which leads to the conclusion

that alternative treatment as well as any decision connected to disease handling can only be supported through education of farmers as well as veterinarians to judge a situation as well as a profound understanding of the principles for organic animal husbandry. Below we recommend that it should be a general rule that all use of veterinary medicine and veterinary treatments including vaccination in a herd should be recorded and available for the organic certification bodies.

Lack of support from animal health professionals

There seems to be a general lack of knowledge and support to the development of organic farming from veterinarians and other advisors working with animal production, health and disease aspects. There is a lack of capability by animal health professionals to support the farmer to build up robust systems, which promote health and prevent diseases and to handle disease in alternative ways, like required by the organic principles, the EU regulation and farmer organisations. This points to a need not only to educate farmers appropriately to become organic farmers, but also to educate the animal health professionals, who are expected to support them in their daily practices and production.

Ensuring food safety in organic farming through HACCP

Considering that food safety and quality are of great importance to organic consumer's interest it is important to strengthen the credibility of organic products. It is proposed that the introduction of hazard analysis critical control points (HACCP) should start from down to farm level.

Problems and challenges linked to diverse living conditions between countries

Outdoor life in difficult climatic situations

The restrictions to outdoor life in e.g. Alpine areas because of climatic conditions is a challenge to organic livestock farming, which should be solved through innovative thinking and allowing alternative free-range systems under certain circumstances and conditions. It could be extended indoor areas, where the animals are housed all year round with access to outdoor areas during periods where this is possible, e.g. 3-4 months of the year.

Lack of straw or certain feed stuffs because of climate

In certain areas, e.g. mountain areas or North Scandinavia, the production of straw is very limited, and therefore also difficult to give the animals access to bedding material. This can be a problem with regard to foraging material, nests and beddings. Other material must be used instead, e.g. sand, sawdust or mats for bedding material, leaves and plant material as foraging material.

Lack of home market

One of the major concerns in organic production is marketing of products, which is dictated by supply and demand. Supply in economic terms, refers to the quantity of a product that the farmers are willing to produce at a certain price. On the other hand, demand refers to the quantity of a product that consumers are willing to purchase at a certain price. The previous notion is that the more something costs, the less of it a consumer will buy. In most cases, organic livestock production costs more and products have to be sold at a higher price. As clearly stated in the report from the one-day roadshows in five new and candidate EU member states, the home market is not well developed in many new EU member states. Also in other regions of EU, the home-market is not well developed, or there are unreasonable discrepancies between producer and consumer prices. This will also be reflected in the farmers' ability to buy feedstuffs and/or have it transported. It is a question how this situation can be improved for the individual farmer, e.g. whether subsidies is the only solution.

Traditional farming, where substantial changes are needed

In some regions, it is without doubt possible to have organic livestock farming and live up to the principles and legislation, but the conversion process is difficult, because the traditional farming systems in the area are based on e.g. housing systems, which are not acceptable in organic farming, e.g. tied stall systems or indoor systems. The conversion can be supported on national and EU level by making plans for conversion and changing the system and the management practices on regional level over an extended period of time. The individual farmer can then make a plan for the farm, which regularly is evaluated by the certification bodies.

Smallholder farming and urban/peri-urban farming

Among the traditional farming systems described above, there are some, which are difficult or even unable to convert under the current legislation and principles, such as smallholders and urban/peri-urban farmers, who e.g. only have one animal of a certain species. In some farms, fattening of bulls takes place indoor, as it is considered too dangerous to keep bulls on grass e.g. in areas with many smallholder farmers and e.g. heifers and cows on grass. Solutions like smaller and very well fenced exercise areas then might form a solution. Likewise, the phenomenon of urban/peri-urban farming, where animals are kept indoor with access to a very limited land area and only bought-in feed has to be treated separately. Use of common grassland also takes place under widely different conditions in e.g. Scotland, Switzerland, Norway and Romania. Pre-conditions for keeping such land organic must be settled. These areas have not been discussed in-depth in the SAFO-network so far. A relevant approach for finding solutions will be to analyse the practices related to these special farming systems.

Problems and challenges related to understanding and interpretation of the EU regulation

A final standard development report will be produced after the 5th SAFO workshop in June based on consensus among SAFO partners, who will discuss the recommendations below as well as come up with new ones.

Lack of clear definitions and detailed specifications

The lack of definitions and specifications on certain areas is clearly a problem, which should be solved within the EU regulations. Below, we give recommendations with regard to some definitions and specifications.

Some of the formulations allow the diversity and local traditions and conditions to be involved, such as 'appropriate breeds'. If a list should be given of 'appropriate breeds', it could easily be confusing, limit the applicability of organic farming and create a high degree of bureaucracy (e.g. people applying and arguing that a particular local breed is suitable etc.). Therefore, formulations like these are included in order to give a clear signal that it is an issue, which should be thought about, but in each case, it is a question of education, giving good and illustrative examples to facilitate an understanding of the ideas of organic farming and each particular formulation, and becoming familiar with the underlying principles of organic farming as well as of the subject areas in question, such as breeding strategies, in order to combine the knowledge and insight in ways, which are suitable for geographical areas.

CONCLUSIONS AND RECOMMENDATIONS

This report is based on a problem-focused questionnaire survey among participants in the European concerted action network project Sustaining Animal Health and Food Safety in Organic Farming. In our opinion the problems identified can be categories in three different levels, depending on where action is recommended. These are:

- 1) Problems and challenges related to the current status, practices and way of farming mainly at the farm level. These problems can be solved and challenges can be met in a dialogue between organic farmers, producer organisations, certification bodies, governments etc. on a national level in order to improve the situation.
- 2) Problems and challenges linked to the diversity between countries, national and regional characteristics like climate, which have to be dealt with when making regulations, and their national interpretation;
- 3) Problems and challenges, which can be met on EU level through improvement in the formulation of the regulation, clearer definitions, and more detailed guidelines and specifications.

The following recommendations can be given to each of the main problem areas:

- 1) Problems and challenges related to current status, practices and ways of farming
 - Training and education of farmers during conversion should be supported on national and organisational level.
 - Training for veterinarians and animal health professionals including inspectors from certification bodies in order to build up the necessary capacity to advice and judge situations in organic herds.
 - A conversion plan covering organic livestock enterprises for each organic farm should be made and available for certification bodies, which should approve it. The farmer is responsible for making this plan, which is aimed at the conversion of his/her particular farm. The farmer can involve veterinarians or any other person or advisor, which can contribute to the formulation of a plan.
 - An animal health plan should be developed by all organic farmers keeping farm animals and provided to the certification authorities. The farmer does not have to involve others in the development, but he/she should update and revise the plan every year.
 - Breeding programmes for all animal species involved in organic farming should be encouraged and supported on national and EU level.
- 2) Problems and challenges linked to the diversity and regional and local conditions
 - A solution must be found when climatic conditions (such as much snow and frost during much of the year only allow very limited access to outdoor areas, or straw is not commonly available) do not allow the organic farmers to fulfil the organic rules. Regional and local committees together with representatives from the EU conditions can evaluate the situation and give guidelines adjusted to local conditions, e.g. indoor exercise areas, smaller outdoor exercise areas etc..
 - In areas with difficult conditions for organic farming or for implementation of the EU regulations (e.g. lack of home market, organic feed stuff, land areas), the conversion plan should be made and an extended period should be allowed for the farm in this situation. The conversion plan must be available for the certification bodies, which can monitor annually whether progress has been made in accordance with the plan.

- Specifications and detailed guide lines should be developed for the situations mentioned below and the many ways they can be practiced. They should be drawn up at regional and national levels, but in accordance with the EU regulations. There might arise situations where a change in the formulation of the EU regulation may be relevant. So far, we judge it as diverse conditions, where problems primarily must be solved in close collaboration with the local farmers, advisors and certification bodies.
 - o Use of common land
 - o More than one farm involved in the cycle of an organic farm ('farmer collectives')
 - o Urban or peri-urban farming with limited access to pasture, and
 - o Smallholder production, where it e.g. is not possible to talk about a 'flock' of animals
- 3) Problem areas linked to the EU regulation
- We suggest the following definitions of terms used in the EU regulation in order to improve the wording of the EU-legislation:
 - o One treatment course: Treatment of one disease or disease complex (e.g. post-partum complex involving milk fever, retained placenta and mastitis). If the same disease re-occurs within one week after end of medication, it is still considered the same disease.
 - o Last part of fattening phase: Further investigations have to be made on this until the last SAFO workshop, but so far we suggest that this is the last half part of their expected life time.
 - o Natural milk: Milk from female animals of ones own species (and not milk powder).
 - All veterinary treatments should be recorded in order to ensure that a veterinarian is involved and no preventive treatments take place.
 - Suggestions to the formulation of rules regarding alternative treatments are described in Proceedings of the 4th report on standard development.
 - What about the lack of definition on what is a suitable breed and varying interpretation throughout old and new members, should that be mentioned here?