

Animal welfare and protection during transport: the current legislative framework in European Union

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Summary. The Protocol on the protection and welfare of animals annexed to the Amsterdam Treaty (1997) establishing the European Community requires that in formulating and implementing agriculture and transport policies, the Community and the Member States shall pay full regard to the welfare requirements of animals. In the field of animal welfare, transport has been, and still is today, cause of much controversy. Council Directive 91/628/EEC, amended by Directive 95/29/EC, constitutes the current Community legislative framework. In the light of experience gained under Directive 91/628/EEC at harmonising Community legislation on the transport of animals, and the difficulties encountered due to the diverse transposition of that Directive at national level, it was more appropriate to set out Community rules in this field in a regulation. In fact Council Regulations (EC) no. 97/1255, no 98/411 and no. 2005/1 were adopted subsequently to provide more detailed rules. This paper is aimed to review the current EU legislation affecting the animal transport.

Key words: animal transport, welfare, protection, legislation, European Union.

Riassunto (*Benessere e protezione degli animali durante il trasporto: legislazione vigente in Unione Europea*). Il Protocollo sulla protezione ed il benessere degli animali allegato al Trattato di Amsterdam (1997) stabilisce che, nella formulazione e nell'attuazione delle politiche comunitarie per i settori dell'agricoltura e dei trasporti, la Comunità e gli Stati Membri tengano pienamente conto delle esigenze in materia di benessere degli animali. Nell'ambito delle problematiche riguardanti il benessere animale, il trasporto è stato, ed è tutt'oggi, causa di molte polemiche. La direttiva 91/628/CEE, modificata dalla direttiva 95/29/CE, rappresenta l'attuale quadro legislativo comunitario. Alla luce delle esperienze acquisite, per quanto concerne l'armonizzazione della legislazione comunitaria sul trasporto di animali, e delle difficoltà incontrate a causa del diverso recepimento di tale direttiva a livello nazionale, è stato ritenuto più appropriato stabilire, in tale ambito, regole comunitarie sotto forma di regolamento. Infatti, regolamenti (CE) n. 1255/97, n. 411/98 e n. 2005/1 del Consiglio sono stati successivamente adottati per fornire regole più dettagliate. Scopo del presente lavoro è quello di effettuare una disamina della normativa europea vigente in tema di trasporto degli animali.

Parole chiave: trasporto animale, benessere, protezione, legislazione, Unione Europea.

INTRODUCTION

There is a growing appreciation of the insistence of consumers that animals used in food production should be well treated. In response, the body of legislation on the protection of animals (*Table 1*), covering farming, transport, slaughter and experimentation [1], has increased steadily in recent years. This trend is likely to accelerate, especially in the light of the Protocol to the Amsterdam Treaty (1997) [2] which raised the ambitions of all EU institutions to do more to raise welfare standards.

In fact, the Protocol to the Treaty on Animal Welfare requires the European Institutions and the Member States to take full account of animal welfare when drafting and applying the Community's policies on agriculture, transport, internal market and research. This Protocol defines animals as "sentient beings" (*i.e.* capable of feeling pain) and confers special consideration for them under European Law.

There is also a growing appreciation that high welfare standards have both a direct and indirect impact on food safety and quality and that regulatory and support systems in agriculture must adapt accordingly.

In the field of animal welfare, transport has been, and still is today, cause of much controversy [3]. Animal rights activists frequently demonstrate in protest against animals' conditions during transport and generally have support from public opinion, especially where there are cases of cruelty, suffering and death. Animal rights activists believe that there is still a long way to go as far as protection of animals is concerned.

THE QUESTION OF ANIMAL WELFARE

Animal welfare is an important issue for the general public, notably in the European Community (EC) and in non-EC Countries.

Table 1 | Selection of principle legislation protecting animals in the European Community

Year	Legislation
1974	Council Directive 74/577/EEC: Requires stunning of animals before slaughter
1978	Council Decision 78/923/EEC: Approves the European Convention for the protection of animals kept for farming purposes. Provides general rules for the protection of all species of animals kept for food, wool, skin, fibre, for other farming purposes based on the Farm Animal Welfare Council's "Five Freedoms". Amended in 1998 to include fish, amphibians and reptiles
1986	Council Directive 86/609/EEC: Protecting animals used for experimental and other scientific purposes
1988	Council Directive 88/146/EEC: Prohibits certain substances having hormonal action for use in livestock farming Council Decision 88/306/EEC: Approves the convention for the protection of animals for slaughter Council Directive 88/166/EEC: Providing minimum standards for protecting the welfare of laying hens housed in battery cages. Amended in 1999 and 2002
1990	Council Regulation (EEC) 1907/1990: Providing marketing standards for eggs
1991	Council Directive 91/628/EEC: Protecting animals during transport. Amended in 1995, 1997 and 2001 Council Directive 91/629/EEC: Providing minimum standards for the protection of calves. Amended in 1997 Council Directive 91/630/EEC: Providing minimum standards for the protection of pigs. Amended in 2001
1993	Council Decision 93/119/EC: Protecting animals at the time of slaughter or killing
1997	Treaty of Amsterdam: Grants animals special consideration under the law as "sentient beings"
1999	Council Directive 1999/22/EC: Protecting animals kept in zoos

(Source: http://europa.eu.int/comm/food/fs/aw/aw_references_en.html [25] visited on 10 February 2006).

The question of animal welfare therefore is a complex issue, which is at the crossroads of economic, ethical, animal health, public health, food production and legal issues. It is evident that the importance attached to animal welfare varies amongst World Trade Organisation (WTO) members.

Nevertheless, the fact that animal welfare is an emerging trade issue has been recently acknowledged by the Organisation for Economic Cooperation and Development (OECD), and the international conventions already in place and ongoing work within the World Organization for Animal Health (Office International des Epizooties, OIE) confirm this. It should be noted that the OIE's current International Animal Health Code contains a section devoted specifically to the protection of animals during transport [4].

In particular, the OIE Code provides guidelines and recommendations on the following aspects:

- general principles to be observed common to all forms of transport;
- special considerations according to methods of transport;
- general recommendations on air transport.

Its recommendations on protecting animals during transport were certainly based on current Community legislation as well as on Council of Europe initiatives. Also, the recent inclusion of animal welfare in its work plan was in response to the evolution of animal welfare issues in the last few years all over the world but particularly in the EU. And the OIE's work on animal welfare standards will surely be cross-fertilised by ongoing discussions at EU level and by negotiating activity in this area with the candidate countries.

Welfare definition: a clearly defined concept of welfare is needed for use in precise scientific measurements, in legal documents and in public statements or discussion.

The welfare of an individual is its state as regards its attempts to cope with its environment [5] and includes both the extent of failure to cope and the ease or difficulty in coping. Health is an important part of welfare, whilst feelings such as pain, fear and various forms of pleasure are components of the mechanisms for attempting to cope, so should be evaluated where possible in welfare assessment [6, 7].

While welfare refers to a range in the state of the animal from very good to very poor, whenever there is stress, welfare is poor. It is possible to define welfare in such a way that it can be readily related to other concepts such as: needs, freedoms, happiness, coping, control, predictability, feelings, suffering, pain, anxiety, fear, boredom, stress and health.

Where welfare is poor, the best overall assessment of welfare is a function of the severity of effect on the individual and the duration of that effect. Efforts should be made to evaluate how good welfare is as well as the extent of any poor welfare.

A variety of welfare indicators can be used to assess the welfare of animals which are being handled or transported [8, 9].

The commonly used physiological indicators of stress during transport are summarized in *Table 2*.

This information has been generally used in formulating laws about how animals should be housed, managed and treated.

Therefore laws can have a significant on animal welfare. Codes of practice can also have significant effects on animal welfare for example during transport. The most effective of these, sometimes just as effective as laws, are retailer codes of practice, since retail companies need to protect their reputation by enforcing adherence to their codes [10].

Rules exist in some Third Countries. They are (bind-

Table 2 | *Physiological indicators of stress during transport [26]*

Stressor Measured in blood or other body fluids	Physiological variable
Food deprivation	↑ FFA, ↑ -OHB, ↓ glucose, ↑ urea
Dehydration	↑ osmolality, ↑ total protein, ↑ albumin, ↑ PCV
Physical exertion	↑ CK, ↑ LDH5, ↑ lactate,
Bruising	↑ cortisol, ↑ PCV, ↑ LDH5, ↑ Heart rate
Fear /arousal	↑ heart rate variability, ↑ breathing rate
Motion sickness	↑ vasopressin
Hypothermia /hyperthermia	body temperature, skin temperature

FFA: free fatty acids; β-OHB: hydroxybutyrate; PCV: packed-cell volume; CK: creatine kinase; LDH5: lactate dehydrogenase isoenzyme 5.

ing) legislation or (voluntary) guidelines/codes of conduct. Where both exist, legislation takes precedence. This information is organised in *Table 3*.

Besides the Council of Europe has drawn up, and con-

tinues to develop, five conventions on various aspects of animal welfare. The following is relevant to animal protection during transport: the European Convention for the protection of animals during international transport

Table 3 | *Animal protection rules during international transport in 30 Third Countries (at 1999)*

Non-EU Member of the Council of Europe	An animal welfare act?	Convention on protection during international transport
(1) Argentina		Legislation
(2) Australia		Guidelines and codes of conduct
(3) Botswana		-
(4) Bulgaria		-
(5) Canada		Guidelines and codes of conduct
6) Cape Verde		Guidelines and codes of conduct
(7) Chile		Guidelines and codes of conduct
(8) Croatia	yes	Legislation
(9) Cyprus		Legislation
(10) Czech Republic		Legislation
(11) Estonia	yes	Legislation
(12) Hong Kong	yes	-
(13) Hungary	yes	Legislation
(14) India	yes	-
(15) Japan		Guidelines and codes of conduct
(16) Latvia		Legislation
(17) Lithuania	yes	Legislation
(18) Malta	yes	Legislation
(19) Mexico		Guidelines and codes of conduct
(20) Namibia		Guidelines and codes of conduct
(21) New Zealand	yes	Legislation
(22) Norway	yes	Legislation
(23) Philippines	yes	
(24) Poland	yes	Legislation
(25) Slovak Republic	yes	Legislation
(26) Slovenia	yes	Legislation
(27) South Africa		Guidelines and codes of conduct
(28) Swaziland		Guidelines and codes of conduct
(29) Switzerland	yes	Legislation
(30) USA	yes	Guidelines and codes of conduct

(Source: <http://europa.eu.int> visited on 10 February 2006).

(Paris, 13/12/68) [11]. During 2001 the Commission received authorisation from the Council to negotiate a modified version of the Convention on “animals during international transport” on behalf of the Community.

At present, the 15 old EU Member States are all parties to the Convention, as are Cyprus, Iceland, Norway, Poland, the Czech Republic, Romania, Russia, Switzerland and Turkey. *Table 4* indicates which of the other Council of Europe Members the Convention has been signed.

BACKGROUND

The first Community Directive in this area was adopted in 1977 just after the adoption of the first Directive on the protection of animals in 1974 [12]. Subsequent legislation on the protection of animals during transport was adopted in 1991 and in 1995.

Today Council Directive 91/628/EEC [13] amended by Directive 95/29/EC [14] constitutes the current Community legislative framework. Council Regulation (EC) no. 97/1255 [15], Council Regulation (EC) no 98/411 [16,17] and no. 2005/1 [18] were adopted subsequently to provide more detailed rules.

Council Directive 91/628/EEC - Under Council Directive 91/628/EEC of 19 November 1991 on the protection of animals during transport and amending Directives 90/425/EEC and 91/496/EEC, the Council has adopted rules in the field of animal transport in order to eliminate technical barriers to trade in live animals and to allow market organisations to operate smoothly, while ensuring a satisfactory level of protection for the animals concerned.

For example, this Directive, in order to improve the welfare of certain categories of transported animals, has laid down requirements concerning maximum journey times after which the animals are to be unloaded, fed, watered and rested for at least 24 hours before travelling further. Thus, long-distance transport of animals must be broken up through staging points. It has defined loading densities for the most commonly transported species (horses, cattle, sheep, goats, pigs and poultry). A maximum limit of eight hours was introduced as a general rule for the transport of livestock.

Council Directive 95/29/EC - Council Directive 95/29/EC introduced several changes, including: Transporters of animals were made responsible for implementing the main provisions of the Directive and had to be approved by competent authorities in the Member States; loading densities were set for farm animals; journeys exceeding eight hours must be planned in accordance with specific requirements of the Directive concerning vehicles and travelling times. A specific procedure, the “route plan”, was introduced in order to impose proper planning and help verify the correct execution of long-distance journeys.

It also included an obligation for the Commission to submit a report to the Council on the experience acquired by the Member States since the implementation of the directive. The sources of information used in drafting this report were Member States inspection reports, Food and Veterinary Office (FVO) inspection reports and Complaints from Non Governmental Organisations (NGOs).

The Report from the Commission to the European Parliament and the Council on the experience acquired by Member States since the implementation of Council Directive 95/29/EC of 29 June 1995 (amending Directive 91/628/EEC concerning the protection of animals during transport), recommended amending current Community legislation in this field.

In Council Regulation (EC) No 1255/97 specifies locations (staging points) in which unloaded animals are kept for resting and supplied with feed and water.

Additional standards applicable to road vehicles used for the carriage of livestock on journeys exceeding eight hours are defined in a new Council Regulation (EC) 411/98 in 1998. This regulation refers to minimal requirements for bedding material, feeding, accessibility, ventilation, partitions and water supply. Commission Decision 2001/298/EC [19] specify amendments to health certificates for the movement of animals.

CONSIDERATIONS

There is no doubt about the influence that public opinion has had on the development of legislative norms concerning animal transport, but it is also true that development has so far been insufficient and, therefore, pre-existing norms must be modified. The greatest risk during the transport of animals, especially just before slaughter, is that the conditions of stress that may occur can alter the organoleptic and sanitary status of the meat. There is a risk that transporters may use drugs to sedate animals with an ulterior risk of residues in meat.

For these reasons, there is a tendency at present to reduce transport to a minimum and to slaughter animals in the areas where they are reared.

Table 4 | *Non-EU Countries and the Council of Europe animal protection convention*

Non-EU Member of the Council of Europe	Convention on protection during international transport
Bosnia and Herzegovina	
Croatia	
Cyprus	X
Czech Republic	X
Hungary	
Iceland	X
F.Y.R.O.M.	
Malta	
Norway	X
Poland	X
Romania	X
Russian Federation	X
Slovenia	
Switzerland	X
Turkey	X
Yugoslavia	

F.Y.R.O.M.: Former Yugoslav Republic of Macedonia
 (Source: <http://europa.eu.int>, visited on 10 February 2006).

Table 5 | *List of national implementing measures*

Member State	List of national implementing measures	Latest date
Sweden	Statens jordbruksverks föreskrifter om transport av levande djur, Statens jordbruksverks författningssamling (SJVFS) 1996:105	1996
Netherlands	Regeling van de Minister van Landbouw, Natuurbeheer en Visserij van 23/12/1996 (Wijziging Regeling dierenvervoer, Regeling vaststelling bescheiden dierenvervoer en Regeling handel levende dieren en levende producten, Staatscourant van 30/12/1996, nr. 250, bl. 19: 1. Besluit van 08/11/1996 houdende wijziging van het besluit dierenvervoer 1994 van 08/11/1996, Staatsblad 1996, nr. 561.	1996 December
Ireland	1. The Diseases of Animals (Protection of Animals during Transport) Order, 1995, Statutory Instruments number 98 of 1995; 2. The Diseases of Animals (Protection of Animals during Transport) (Amendment) Order, 1997, Statutory Instruments number 326 of 1997.	1997 July
United Kingdom	1. The Welfare of Animals (Transport) Order 1997, Statutory Instruments number 1480 of 1997; 2. The Welfare of Animals (Transport) Order (Northern Ireland) 1997, Statutory Rules of Northern Ireland number 346 of 1997.	1997
Belgium	Arrêté royal du 20/12/1996 relatif à la protection des animaux pendant le transport - Koninklijk besluit van 20/12/1996 betreffende de bescherming van dieren tijdens het vervoer, Moniteur belge du 13/03/1997 Page 5910; Remplacé par l'Arrêté royal du 9/7/99 relatif aux conditions d'enregistrement des transporteurs et d'agrément des négociants, des points d'arrêts et des centres de rassemblements (Moniteur belge du 2/9/99).	1997 March
Spain	Real Decreto número 1041/97 de 27/06/1997, por el que se establecen las normas relativas a la protección de los animales durante su transporte, Boletín Oficial del Estado número 163 de 09/07/1997 Página 21093 (Marginal 15192).	1997 July
Denmark	Bekendtgørelse nr. 201 af 16. april 1993 om beskyttelse af dyr inder transport som ændret ved bekendtgørelse nr. 810 af 29. oktober 1997.	1997 October
Greece	Décret présidentiel numéro 344 du 11/11/1997, FEK A numéro 233 du 25/11/1997 Page 8161.	1997 November
Austria	1. Verordnung des Bundesministers für Wissenschaft, Verkehr und Kunst über die Ausstattung und Beschaffenheit von Tiertransportfahrzeugen und –behältnissen (Tiertransportmittelverordnung- TG-TV), Bundesgesetzblatt für die Republik Österreich, Nr. 679/1996, ausgegeben am 06/12/1996; 2. Veterinärbehördliche Einfuhr- und Binnenmarktverordnung 1996, Bundesgesetzblatt für die Republik Österreich, Nr. 647/1996; 3. Tiertransportgesetz-Luft, Bundesgesetzblatt für die Republik Österreich, Nr. 152/1996; 4. Bundesgesetz über den Transport von Tieren auf der Eisenbahn (Tiertransportgesetz-Eisenbahn - TGEisb), Bundesgesetzblatt für die Republik Österreich, Nr. 43/1998 ausgegeben am 27/02/1998; 5. Bundesgesetz über den Transport von Tieren auf der Straße (Tiertransportgesetz-Straße - TGSt), BGBl. Nr. 411/1994, in der Fassung BGBl. I Nr. 134/1999.	1998 February
Luxembourg	Règlement grand-ducal du 22/06/1998 relatif à la protection des animaux en cours de transport, Mémorial A Numéro 59 du 29/07/1998 Page 1020.	1998 July
Portugal	Decreto-lei n. 294/98 de 28/09/1998. Estabelece as normas relativas à protecção dos animais durante o transporte e revoga o Decreto n. 153/94, de 28 de maio, e a Portaria n. 160/95, de 27 de Fevereiro, Diário da República I Série A n. 216 de 18/09/1998 Página 4838.	1998 September
Finland	1. Eläinsuojelulaki (247/1996); 2. Asetus eläinten kuljetuksesta (491/1996); 3. Maa- ja metsätalousministeriön päätös eläinten kuljetukselle asetettavista eläinsuojeluvuoratuksista (27/EO/1996); 4. Djurtransportsförordning (97/98) 29/09/1998, Ålands författningssamling Djurskyddslag (95/98) 29/09/1998, Ålands författningssamling	1998 September
Italy	Decreto Legislativo del 20/10/1998 n. 388, attuazione della direttiva 95/29/CE in materia di protezione degli animali durante il trasporto. Gazzetta Ufficiale - Serie generale - del 09/11/1998 n. 262 pag. 4.	1998 November

(Source: <http://europa.eu.int/> visited on 10 February 2006).

Table 5 | *Continued*

Member State	List of national implementing measures	Latest date
Germany	<ol style="list-style-type: none"> 1. Verordnung zum Schutz von Tieren beim Transport (Tierschutztransportverordnung - TierSchTrV) vom 25/02/1997, Bundesgesetzblatt Teil I vom 28/02/1997 Seite 348; 2. Erste Verordnung zur Änderung der Tierschutztransportverordnung vom 23/02/1999, Bundesgesetzblatt Teil I vom 26/02/1999; 3. Bekanntmachung der Neufassung des Tierschutzgesetzes vom 17/02/1993, Bundesgesetzblatt Teil I vom 23/02/1993 Seite 254; 4. Bekanntmachung vom 02/12/1996, Bundesanzeiger N° 81a vom 30/04/1997; 5. Bekanntmachung vom 02/12/1996, Bundesanzeiger N° 80a vom 2/09; 6. Verordnung vom 25/02/1997, Bundesgesetzblatt N° 12 vom 28/02/97. 	1999 February
France	<ol style="list-style-type: none"> 1. Arrêté ministériel du 05/11/1996 relatif à la protection des animaux en cours de transport, Journal Officiel du 23/11/1996 Page 17098; 2. Décret Numéro 95-1285 du 13/12/1995 relatif à la protection des animaux en cours de transport, Journal Officiel du 15/12/1995 Page 18237; 3. Loi numéro 99/5 du 06/01/1999 relative aux animaux dangereux et errants et à la protection des animaux, Journal Officiel du 07/01/1999 Page 327; 4. Décret 99-961 et arrêté ministériel du 24 novembre 1999 modifiant l'arrêté du 5 novembre 1996 relatif à la protection des animaux en cours de transport (JORF du 25 novembre 1999 p17495-17500). 	1999 November

(Source: <http://europa.eu.int/> visited on 10 February 2006).

In Countries where there is an awareness of the problem of animal welfare, there are already norms and regulations concerning farming systems, the use of drugs, transport (see the *Table 5* that indicates the list of national implementing measures) and slaughtering procedures

which aim at reducing suffering as much as possible.

An awareness arose in Europe that the laws in force were insufficient to satisfy the requirements of animal welfare. From a technical point of view the main findings are summarized in *Table 6*.

Table 6 | *Main findings and actions taken by the Commission on the protection of animals during transport*

Main findings	Actions from the Commission of the European Communities
Transport of horses	<ul style="list-style-type: none"> - Additional requirements for the transport based on scientific evidences and current experience as: individual compartments, maximum number of animals per vehicle, minimum and maximum temperature for transport. - Mandatory unloading, resting, feeding and watering of the animals at the border inspection posts of Union
Non compliance of route plans	- Amend the route plan - Standing Veterinary Committee procedure to introduce future amendments
Non compliance with travelling time limits	- Mutual assistance - harmonised enforcement
Negligence and poor handling of animals	- Harmonised certification of transporter
Animals unfit for transport	<ul style="list-style-type: none"> - Detailed definition of unfit animals - Health certificates
Inadequate road vehicles	<ul style="list-style-type: none"> - Harmonised certification of transporter - Mutual assistance
Insufficient ventilation on road vehicles used for long-distance transport	- New standards for ventilation and temperatures inside vehicles
Overloading	<ul style="list-style-type: none"> - Mutual assistance - harmonised enforcement - Harmonised certification of transporter
Approval of transporters	- Harmonised certification of transporter

(Sources: <http://europa.eu.int/eur-lex/it/index.html> visited on 10 February 2006).

This awareness was expressed in a proposal for regulation concerning the protection of animals during transport made by the European Commission Council and Parliament in the summer of 2003 [20]; this proposal was approved and has been in force since January 2005.

The aforementioned regulations identify the chain of animal transport operators and the persons responsible for each phase and have introduced efficient instruments, such as tachygraphs. Now there are much stricter regulations for transport which lasts more than nine hours, even if it does not cross national frontiers.

The regulations recognise that stress is greater for the animal when they are loaded and unloaded and so include indications covering conditions before and after the transport itself. Member States of the EU are invited to draw up good conduct guidelines.

The most important points of the new regulations can be summarised as follows:

- to establish a harmonised format for transporters' authorisation;
- to set up specific procedures with a view to facilitating checks and appropriate follow-up of violations. Inadequate follow-up of infringements of legislation on animal welfare encourages non-compliance with such legislation and leads to distortion of competition. Therefore, uniform procedures should be established throughout the Community to increase checks and the imposition of penalties for infringements of animal welfare legislation. The Member States should lay down rules on penalties applicable to infringements of the provisions of this Regulation and ensure that they are implemented. Those penalties must be effective, proportionate and dissuasive (see Article 25, Council Regulation 1/2005);
- to introduce a ban on the transport of very young animals and set out definitions for when animals are unfit for transport (see Council Regulation's Annex) and introduce inspecting relations of the Member States;
- to develop better equipment for the comfort and safety of animals;
- to establish specific measures for the transport of horses. Registered Equidae, as defined in Article 2, letter c of Directive 90/426/EEC [21], are frequently transported for non-commercial purposes and such transports must be carried out in line with the overall objectives of this Regulation. With regard to the nature of such movements, it appears appropriate to derogate from certain provisions where registered Equidae are transported for competition, races, cultural events or breeding. However, it is not appropriate to apply such derogation to Equidae transported, directly or after transit through a market or marshalling centre, to a slaughterhouse for slaughter; these animals, in accordance with Article 2, letter d, and 8, point 1, second indent of Directive 90/426/EEC, are to be considered as "Equidae for slaughter";
- to improve the qualifications of the personnel handling animals. The way animals are handled has a direct influence on their welfare. Bad practices or negligence often originate from lack of knowledge

of animals' needs and could be addressed by the education of those handling and transporting the animals. The SCAHAW has considered that a legal requirement for a certificate issued after completion of an approved course is a valuable way of coping with this issue. Poor welfare is often due to lack of education. Therefore, training should be a prerequisite for any person handling animals during transport and training should be provided only by organisations approved by the competent authorities;

- to re-examine several fundamentals of the directive on a scientific basis;
- to reinforce the responsibilities of the transporters as well as of the other stakeholders concerned with the transport of animals; animal transport involves not only transporters but also other categories such as farmers, traders, employees of assembly centres and slaughterhouses. As a result, some obligations regarding the welfare of the animals should be extended to anyone involved in the transport of animals;
- to emphasise the role of competent authorities in supervising transport operations and strengthen the cooperation between the services concerned;
- to reinforce instruments for control after transport by means of a journey log.

In particular, the measures adopted by the new EU Regulations aim at a strict enforcement of existing Community legislation, improving the protection and welfare of animals as well as preventing the occurrence and spread of infectious animal diseases.

Transporters will be granted a specific authorisation. This will be granted only under specific conditions and for a limited period of time. Such transporters will be registered in a national electronic database.

In order to make stakeholders more responsible, a new route plan administrative procedure will make it compulsory for the operators to systematically check the consignment at the place of destination, to keep records of the results and to report any anomaly to officials.

The EU Regulation annex reports techniques that for animal welfare protection from the practical and concrete point of view. For example, concerning the vehicles used for animal transport, higher standards for ventilation and drinking facilities are required on the basis of a specific opinion by the SCAHAW.

Shorter travelling periods and longer resting periods are foreseen for animals on board the vehicles. To avoid the most stressful operations of loading and unloading the use of staging points is not contemplated by the EU Regulations because of the demonstrated risk for the health of the animals. Greater space allowances on the truck apply for long journeys.

All livestock vessels operating from Community ports will be subjected to specific requirements and a certificate of approval.

The EU Regulation also establishes stricter rules for horse transport. Experience shows that the transport of horses for slaughter over long distances is a subject of particular concern. Therefore in addition to the above mentioned requirements the regulation makes it com-

pulsory to transport horses in individual stalls for long distance journeys.

It is, moreover, well-known that the worst situations of poor handling and outright cruelty to animals have been reported in market places.

The Commission noted this and, for the first time in EU legislation, extended provisions on animal protection to all places where animals are loaded, unloaded and handled, including livestock markets. In particular, livestock markets will be subjected to specific requirements regarding the training of personnel handling animals.

Finally, the Council Regulation Annex IV specifies better the training which drivers and attendants (Article 6, paragraph 5, and 17, paragraph 1 of the Council Regulation) must receive. This is a particularly important aspect because these are the people who are most likely to deal with emergency situations.

The training courses shall include the technical and administrative aspects of Community legislation concerning the protection of animals during transport and in particular the following points:

- a) Articles 3 and 4 and Annexes I and II;
- b) animal physiology and in particular drinking and feeding needs, animal behaviour and the concept of stress;
- c) practical aspects of animal handling;
- d) impact of driving behaviour on the welfare of transported animals and on the quality of meat;
- e) emergency care for animals;
- f) safety considerations for personnel handling animals.

CONCLUSIONS

The Scientific Committee on Animal Health and Animal Welfare (SCAHAW) on 11th March 2002 adopted an opinion on animal welfare during transport [22].

Scientists agree that, despite a certain amount of adaptation which varies according to the species and the conditions [23], welfare tends to decrease as journey length increases. Journeys, therefore, should be as short as possible and transport conditions should be designed and operated so as to minimise sources of stress. In addition to factors that may weaken the immune system, transport operations often put together animals originating from different places and this increases the risk of the spread of diseases [24].

The Commission has carefully analysed the recommendations provided by the SCAHAW.

The Commission considers that the conclusions of the report have to be considered in the framework of practical experience and in the light of their enforceability.

The proper enforcement of animal protection legislation is a key element to improve the current situation. Moreover, the practicability of moving in one step towards achieving the SCAHAW's recommendations needs to be considered carefully.

The Commission believes that adopting a step by step approach, implementing the main aspects of the recommendations, represents the best means of introducing real improvements in animal welfare over the short to medium term. The aim of the recommendations is,

therefore, to guarantee that the high standards suggested by the Scientists are fulfilled via the creation of proper legislative instruments allowing competent authorities to perform better control and enforcement.

The necessity to better develop knowledge on animal welfare during transport is also urgently recognised by the Commission. The Commission is engaged in promoting further research in the animal health and animal welfare areas in particular in relation to transport to better develop knowledge on the most sensitive aspects.

From this background there is a clear consensus for improving the level of enforcement as a priority. Animal health concerns have also determined the urgency for the Commission to take action in this field in particular by refining the tools for the controls by competent authorities on long distance transport operations. This objective can be achieved in particular by allowing competent authorities for the welfare of animals to check the recording equipment installed in road vehicles required by the European social legislation as regards journey time.

In this regard the regulation introduces detailed requirements for the training of drivers for livestock transport by introducing a specific curriculum, the need for approved training bodies and a harmonised certificate of training. Furthermore in order to facilitate the controls, the rule reinforces the harmonisation of documents (transporters' authorisation, drivers' certificates, vehicles approvals) and procedures (establishment of contact points for each Member States, communication of infringements). Restrictive conditions are laid down in the regulation for granting an authorisation to transporters and transporters operating long distance journeys would be registered in a specific database. The legislation lists the specific checks to be carried out by officials for consignments arriving or leaving the customs territory of the Union.

In conclusion, legislators have done a very good job in this new EU Regulation.

Up till now, these matters have been put in shadow in the preceding Directives, the new regulation will permit a better quality of transport and, consequently, better protection of transported animals' health.

The innovations, certainly, will have fundamental role in the improvement of transport conditions, not only in the journey itself, but also and mainly in loading and unloading operations.

To safeguard animals during transport is equivalent to safeguarding their welfare and their health and, consequently, to guarantee safety and quality of the meat that, as already said, are closely correlated to the animal's welfare.

One of the key points of the EU Regulation is the role assigned to the transporters, who assume greater responsibility concerning both bureaucratic matters and training.

The new Council Regulation is, clearly, more exacting and precise than previous Community Directives to which the Member States had to conform and, therefore, it is important that all Member States will put it into practice, Italy is, hopefully, leading the way.

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