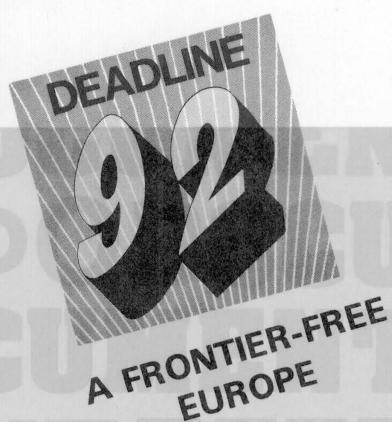


**FIELD STUDY  
INTO THE INTERNATIONAL TRANSPORT OF  
ANIMALS AND FIELD STUDY CONCERNING  
THE STUNNING OF SLAUGHTER ANIMALS**



**COMMISSION  
OF THE EUROPEAN  
COMMUNITIES**

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Commission of the European Communities

**FIELD STUDY  
INTO THE  
INTERNATIONAL TRANSPORT OF ANIMALS**

**AND**

**FIELD STUDY  
CONCERNING THE STUNNING  
OF SLAUGHTER ANIMALS**

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## FOREWORD

These studies have been carried out on behalf of the Commission of the European Communities by Drs. P. Van Houwelingen and Mr P. Vingerling of the Veterinary Service of the Dutch Ministry of Agriculture and Fisheries.

The views expressed in the reports are those of the authors, are not necessarily shared by the Commission and do not prejudice the future position of the Commission on these subjects.

Commission of the European Communities

FIELD STUDY  
INTO THE  
INTERNATIONAL TRANSPORT OF ANIMALS

## C O N T E N T S

### P A R T 1 FIELD STUDY INTO THE INTERNATIONAL TRANSPORT OF ANIMALS

#### GENERAL Page

- Introduction	1
- Research format	2
- Transport certificate	3
- Feeding and watering	6
- Complaints procedure	8

#### TRANSPORT BY ROAD

- General	9
- Export accommodation	10
- "Fit to travel" inspection	10
- Quality of cattle trucks	12
- Loading	12
- Maximum loads	13
- Separation	13
- Identification	13
- Pregnant animals	13
- Communication	14
- Frontier post opening times	14
- Veterinarians at frontier posts	15
- Accommodation at frontier posts	15
- Clinical inspection	16

#### TRANSPORT BY SHIP

#### BULK TRANSPORT

- General	17
- Export points	17
- Fitness to travel inspection	17
- Vessel quality	18

	Page
- Loading	18
- Maximum loads and separation	18
- Identification	19
- Hours of work	19

ROLL-ON ROLL-OFF TRANSPORT

- General	19
- Export accommodation	19
- Fitness to travel inspection	20
- Quality of cattle trucks	20
- Quality of ships	20
- Preventive measures	20

TRANSPORT BY TRAIN

- General	21
- Export accommodation	22
- Fitness to travel inspection	23
- Waggon quality	23
- Loading up and stowing	23
- Frontier posts	23

TRANSPORT BY AIR

- General	24
- Export accommodation	24
- Fitness to travel inspection	24
- Quality of aircraft	25
- Loading up, separation and stowage	26
- Communication	26
- Airport accommodaton	27
- Opening times	27
- Inspection of protected animals on importation	27

<u>CONCLUSIONS</u>	29
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<u>RECOMMENDATIONS</u>	32
------------------------	----



P A R T 1

FIELD STUDY INTO THE INTERNATIONAL TRANSPORT OF ANIMALS

GENERAL

Introduction

This report has been compiled for the European Commission by Drs. P. van Houwelingen, an Inspector with the Veterinary Service in the Department of animal health and welfare at the Dutch Ministry of Agriculture and Fisheries, which was entrusted with carrying out this commission. Mr. P. Vingerling, a specialist in animal transport with the Veterinary Service, also collaborated on the report :

"the nature and problems concerning enforcement of Council Directives 77/489 and 81/389/EEC on the protection of animals during international transport, in particular in relation to this :

- . an investigation of the monitoring, checks and controls by the competent authorities of all Member States at all points before, during and after international journeys of animals from their place of origin to their final destination;
- . an investigation of the problems of coordination between the Member States with respect to control and monitoring of international transport;
- . an investigation of the functioning in practice of the provisions of Article 6 of Directive 77/489/EEC and of Article 2, in particular paragraph 2 of the Annex to Directive 81/389/EEC.

In addition to giving findings of a general nature the report looks at the transportation of animals by the various means of transport and follows this with conclusions and recommendations.

Research format

A week-long working visit was made to each of the 12 Member States in order to be able to fulfil the research brief.

These working visits were carried out in full consultation and collaboration with the Member States in question.

The work programme was planned in such a way as to take into account the Member States' wishes as to when was the best time to visit.

This programme of work during the visits to the Member States consisted of working visits to collection points for export, frontier posts, etc.

Discussions were also held with the competent authorities before and after the visits.

It was not always possible for the Member State to accommodate the researcher's wishes. One reason for this was the limited amount of time available in a visit of only one week. In some Member States, on the other hand, certain types of live animal transportation seldom if ever occur.

It was difficult to get a full impression during some visits because there was little opportunity to visit a number of frontier posts. Clearly the researcher's assessment is not solely based on his on-the-spot findings. He has also drawn on all kinds of discussion with various people concerned, including the frontier veterinarians involved and other experts in this field, not to mention his own years of experience of these sorts of transport problems. Finally, it should be said that about seventyfive

frontier points were visited altogether. These frontier posts will perhaps be somewhat above the average in quality for frontier posts in the Member States. That was, however, difficult to check on beforehand, which is why a conscious choice was also made to visit small frontier points of little economic importance as well as the largest and most important ones.

An attempt has been made to give the broad outline of the problems. The situation does differ, however, from one Member State to the next, and depends on factors such as which animal species are important for the economy of that Member State, the position of the animal protection organisations that have resulted from social and political involvement in these problems, and the economic significance of live animal imports and exports.

Where it is deemed to be of importance mention will be made of exceptions so far as each Member State is concerned. The confidentiality of the report does however mean that the researchers are obliged to state the facts without specifically divulging the name of the Member State in question.

#### Transport Certificate

Generally speaking for the international transport of animals the transport certificate is issued that accords with the specimen prescribed in EEC Directive 81/389.

#### Exemptions

Article 1 of the Annex to EEC Directive 77/489 states that an official veterinarian must be satisfied that the animals are fit for transportation and that, after loading under arrangements approved by the official veterinarian, the latter will issue this fitness for transport certificate.

Exemption from this can be granted in accordance with the procedure in Article 7 of EEC Directive 77/489. A number of Member States have requested the European Commission for an exemption of this kind but to date this has not led to any of the exemptions wanted being granted.

A number of Member States have nevertheless decided to allow the transportation of certain species of animals to be eligible for an exemption of this kind.

These agreements are that :

- Belgium, Netherlands and Luxembourg do not require the issue of the transport certificate and do not carry out any inspection at the intra-Benelux frontier of sheep, goats and solipeds travelling within the Benelux countries.
- Northern Ireland and the Republic of Ireland have decided not to require a transport certificate for the transportation of any live animals between their two countries. Health checks do take place, however, at the frontier.

The Commission has been asked for its formal assent in these case but has so far not officially reacted to these requests.

- On the basis of EEC negotiations that were under way at the time a number of Member States decided to waive the issue of the transport certificate for solipeds other than horses intended for slaughter.

In addition, and in advance of the E.C. white paper, five Member States - Benelux, Germany and France - have recently decided in principle to abolish the check at the frontier for imports of certain slaughter animals and to move it to the reception point instead.

In a few instances Member States do not grant a transport certificate, even though they cannot claim existing agreements or a request for exemption as grounds for not doing so.

One country avails itself of the opportunity to have the transport certificate for the transfrontier transportation of swine and cattle form part of one of the health certificates referred to in Annex F of EEC Directive 64/432 and in the second paragraph of Article 11 of EEC Directive 72/462.

#### Domestic transport

In some Member States the animals can be certificated at a collection point for transfrontier transportation after a ten-hour journey as domestic transport. Also in one instance animals are transported first to the market and then driven straight from there to a collection point. In each case the total transportation time in terms of hours is much longer than can be deduced from the certificate.

With respect to transfer to another form of transport inside the importing country - for example, from train or ship to lorry, or even from one lorry to another - the onward journey, which often can last many more hours, is sometimes considered domestic transport. In such cases Member States do not feel it necessary for a declaration to be issued regarding the loading (maximum loads).

#### Simplified certificate

There is one Member State that for the transport of horses or valuable breeding stock gives a simplified certificate, instead of the prescribed model, or a sticker. These must show that the animals are being transported in accordance with the provisions of EEC Directive 77/489.

E.C. languages

Some Member States fail to comply with the obligation stemming from Article 1, paragraph 2a of EEC Directive 81/389 that the certificate must be drafted in the languages of the consigning country, the country of destination and, if appropriate, the country of transit. These Member States usually provide a certificate in one language only. This may be the Member State's own language or that of the country of destination.

Those Member States that do comply with the obligation run into difficulties as a result since in many cases they opt for just the one certificate drafted in all the Community languages.

That makes for an enormously bulky certificate.

The official Spanish and Portuguese versions of the transport certificate are not available everywhere yet.

Feeding and watering

General

The provisions with regard to feeding and watering are in Articles 4d, 37c, 39 and 41 of the Annex to EEC Directive 77/489.

It has to be said above all that because of their very general nature the provisions are inflexible and no allowances are made for differences in circumstances and between species of animals. What is more, Member States differ in their opinion as to what ought to constitute "a reasonable period" after 24 hours.

Exporter Member States give little or no consideration to how long transportation is expected to take. Two of them have taken measures. One will not issue an export permit for transportation beyond a certain time or distance unless a place for feeding and water is indicated. Checking must be carried out in the country of transit.

It looked as though this arrangement probably largely exists on paper only and cannot give a genuine guarantee.

Another Member State stipulated that feed and water containers must be present if this is needed because of the length of the transportation time. There are no checks on whether feeding and watering does actually take place in this instance either.

Veterinarians at the frontier seldom if ever pay attention to the date and time of departure and therefore do not pay any regard to feeding and watering either.

#### Transport by road

At present no feeding and watering is carried out at frontier posts for transport by road. Among the reasons for this are the facts that :

- the drivers think it is too much work;
- unloading is not possible because of the lack of facilities;
- there is no supervision by veterinarians at the frontier posts and the Member State whose country is being crossed has nothing to gain in economic terms from transit transport;
- in most cases the 24-hour time limit is hardly if at all exceeded;
- food and water is not carried because this has an adverse effect on the lorry's total weight;
- during transportation it is technically impossible to feed and water some species of animals, such as poultry and day-old chicks.

#### Transport by ship

During bulk transport of live animals by ship the animals are fed and watered. Sufficient feedstuff and drinking water is stored on board for the anticipated duration of the voyage. Normally allowance is made on this point for the voyage lasting longer than expected. So far as roll-on roll-off transport is concerned, the same comments apply as for road transport where it forms part of it.

Transport by rail

With transport by train it is possible to feed and water the animals. All the places visited have facilities for this purpose, and animals are usually fed and watered during this form of transportation.

Transport by air

Solipeds travelling by air usually get fed during the takeoff and landing procedure.

Usually the feeding and watering of other species of animals is carried out in the right way. This also depends on the reception facilities possible at airports. A normal shipment arrives at its destination within 24 hours. As a rule these shipments are of animals for breeding and production that are being transported to non-member countries.

Complaints procedure

Under Article 6 of Council Directive 77/489 a Member State may inform another Member State if it considers that the latter is not, or is no longer, complying with the provisions of the directive. If all the appropriate measures are not taken to eliminate the shortcomings that have been found the first Member State is permitted to make the Commission aware of the fact.

The latter may then seek the opinion of one or more veterinary experts. These must be nationals of a Member State other than those involved in the dispute.

This procedure is seldom if ever followed. If a Member State experiences problems with the quality of the transportation contact is usually taken up bilaterally. The complaints can relate to incidents as well as being of a structural kind. The contact can be made between :

- the regional frontier veterinarian and the local veterinarian;



- the regional frontier veterinarian and the regional service;
- the regional frontier veterinarian and the central service;
- the regional service and the local veterinarian;
- the regional services;
- the regional service and the central service;
- the central services;
- the central service and the agricultural attaché or counsellor;
- the central service and the Ministry for Foreign Affairs.

The ad hoc complaints are often based on overloading, identification that is not in order or a certificate that has gone missing or not been filled out properly. Also there are problems with ventilation during transportation in hot or cold weather and during certain forms of transportation.

These ad hoc complaints mean that live animal shipments can be held up for hours and sometimes days. They are mostly made over the telephone, telex or telefax.

The other complaints tend to be based on things that are structurally wrong with the transportation. They mostly relate to overloading. As a rule these complaints are in written form only, with a Member State treating a number of things that have been found wrong as just the one complaint.

## TRANSPORT BY ROAD

### General

In economic terms the transporting of live animals by road is the most important form of transportation. A large proportion of the problems during the transport of live animals are recorded as occurring with road transport.

This form of transport therefore also looms largest in this report. There are not serious problems so far as the transport of live animals for breeding and production is concerned. Most of the animal welfare problems arise with the transport of animals for slaughter.

On the whole it can be assumed that the economic value that the animal represents strongly influences the quality of the transport.

#### Export accommodation

Normally the animals are first assembled at collection points for exportation that have been fitted out for the purposes. If they come from other parts of the country they are accompanied by the health certificates needed for export certification. In some countries a waiting period has to be observed before international consignment may commence. In those countries the animals may have travelled a considerable distance within the country before arriving at the collection point. The other Member States allow departure straightaway. Besides a sufficiently large reception capacity for the animals, and feeding and watering troughs, attention should be paid at these facilities to ventilation, lighting, litter, inspection facilities, pens for injured animals and loading ramps.

Generally speaking the export accommodation is well provided with facilities of this sort. In one Member State the export inspection takes place at the frontier as well. The transport in question is on a small scale and usually over short distances.

#### "Fit to travel" inspection

The "fit to travel" inspection is conscientiously carried out by most Member States. Problems occasionally arise with the export of animals on their

way out of factory farming, such as sows, boars and hens that have finished laying. These can be of a rather dubious quality and whether they stay behind or not depends on the personal integrity and quality of the certifying veterinarian. Clearly the official vet responsible for certification and inspection en route needs to have had the proper training and guidance in this field of expertise.

It looked as though, for a whole host of reasons, official veterinarians were not always in possession of this kind of knowledge. This is often the result of a change in the kind of work they have been doing. It can happen, for example, that a veterinarian who has spent years managing an abattoir may suddenly have to do the work associated with the import and export of live animals.

Although this kind of knowhow is usually rapidly assimilated there is nevertheless a distinct possibility here that the continuity of the quality of the shipments could be endangered.

Veterinarians who thus begin doing the work that has been delegated to a Member State ought to get a short course of training covering the whole field of work and organised by the Ministry or Department involved. In the event of the veterinarian in post having to be suddenly replaced on account of death, resignation, etc. the incoming vet must in any event spend some weeks with an experienced colleague getting to know the tricks of the trade.

This will prevent these inexperienced veterinarians possibly succumbing to the pressures that the business world will undoubtedly place them under from the outset.

Inspection is not always carried out before departure.

Transport certificates are also sometimes issued when there has been no fit to travel inspection and no check on how the shipment is loaded. In a number of other cases there are serious doubts as to whether the animals have been inspected by the official vet.

Quality of  
cattle trucks

General speaking the cattle trucks employed for international road transport are good quality ones. Several Member States have approval systems in one form or another for cattle trucks.

Problems arise from there being no harmonized minimum requirements. This means that Member States with a stricter approval system may sometimes move to refuse entry to means of transport from other Member States, or only allow them in after substantial adaptation.

A number of Member States have the occasional open-topped cattle truck. The space between the wheels of trailers is sometimes used for carrying animals. Mostly this fails to provide sufficient headroom. Some Member States impose tighter inspection standards regarding stability and ventilation on cattle trucks employed for roll-on roll-off transport.

In extremes of very changeable weather conditions during road journeys over long distances it is not solely the quality of the truck that determines the animals' welfare. The quality of the transport in situations of this kind also depends on the conduct of the driver.

Loading

Few if any problems occur during loading, which usually takes place without incident and with the help of the prescribed ramps, etc. An electric prod is used in a few instances. Tranquilizers are occasionally administered to animals on the loading-bridge.

Maximum loads

Most countries have standards regarding maximum loads. These are usually clearly defined. Only a couple of Member States have made them legally prescribed. The others employ recommendations and directives. Although all the standards applied are based on Article 4a of the Annex to EEC Directive 77/489 there are big differences between the Member States.

This regularly causes difficulties at the frontiers. Overloading can ultimately result in cattle trucks being sent back, which is undesirable for the welfare of the animals directly involved.

Separation

Male and female animals are not always separated when loaded. Separation usually is done on the basis of the personal views of the veterinarian and locally accepted practice.

Identification

Many Member States provide the animals with an additional identification number for checking purposes. These numbers are consecutive and simpler to check than individual earmarkings.

Problems with identification can result in animals being sent back to the country of origin.

Some of these animals die during consignment.

Others have to be destroyed on arrival owing to animal disease prevention measures or because of their condition on arrival.

Pregnant animals

The transportation of cows in calf can cause problems. The animals are frequently bought and shipped off too close to the expected date of birth of the calf so that it is a regular occurrence for one or more calves to be born during transportation, due perhaps to the stress that the travelling causes the mother. In most of these cases measures are taken during checks at the frontier to separate the mother and her offspring from the other animals.

The load can be so great sometimes that a separate truck has to be used for this purpose. This also causes problems when the certificates come to be checked since they will no longer show the right number of animals.

The animals in these cases are, however, usually allowed in just the same.

#### Communication

Frontier posts are not always given sufficient warning (24 hours) prior to the arrival of live animal transports. In a number of cases there is actually no notification at all.

If the certificate or identification of the animals does not appear to be correct contact is normally always made with the exporting country. The procedure for this is often very involved. This is partly due to the hierarchical structure of the organisation, on top of which the veterinarian at the frontier point usually lacks modern means of communication like telex, telefax and telephone.

In some frontier posts the official doing the checking does not have an office of his or her own.

Accommodation is shared with a customs agent, customs, or is in the corridor. This means that the veterinarian is manoeuvred into a position of dependence where, for example, he or she will have to ask permission to make a telephone call.

A few newly built frontier points do have all the modern means of communication.

#### Frontier posts opening times

In most Member States it is not possible to cross the frontier outside what are normally the common opening times.

These times differ from country to country. Some frontier posts are shut for a number of hours at

lunchtime while others shut at 2 p.m. for the rest of the day. Most Member States do not allow any more consignments in after 8 p.m. It is only in special cases the veterinarian at the border can decide to make an exception and then only if the customs service is also still working. Proper planning of transportation is made necessary by the combination of opening times and driving bans on certain days. Three Member States have their frontiers open round the clock.

Veterinarians  
at frontier points

It can happen that the frontier is open but no veterinarian is present. In some cases these official veterinarians also have practices of their own and then have to be called out to come to the frontier.

Problems can arise because of the quality of the frontier inspection if these veterinarians are paid piecerate per inspection. Strict checking can mean that drivers will make a detour to other frontier posts and that the amount vets earn from this type of work will go down.

This has brought about a lax attitude in some cases. Here too the same applies as regards what was said earlier about the need for specific knowhow, training and guidance. A small number of the veterinarians carrying out these inspections had in fact heard of the existence of the transport directive but didn't seem to know what they contained.

The rest appeared to be well informed.

Accommodation  
at frontier posts

Most Member States operate checks on live animals in transit. There is one Member State where sometimes the consignment is just routinely processed through customs and no inspection by the official veterinarian takes place.

What goes into this inspection depends very much on the personal involvement and job accomplishment of the frontier vet. In most cases the lack of proper accommodation means these veterinarians are unable to carry out their work properly.

It is estimated that 75 to 85% of the European Community's frontier posts do not dispose of the facilities prescribed in Article 14 of the Annex to EEC Directive 77/489.

In a number of frontier posts it is not even possible to look at the animals from a platform. This platform is sometimes tied up with checking on other forms of transport.

A few Member States are able to put up animals close to the frontier but this is only done in exceptional cases.

Three Member States have frontier posts that are equipped so that live animals can be unloaded on the spot and fed and watered if necessary.

#### Clinical inspection

What it comes down to in practice for animals in transit is that they are either inspected through the cattle truck's ventilation openings or no inspection is carried out at all.

As a general rule all animals being imported are checked. Here too the inspection can usually only happen by way of the cattle truck's ventilation openings. In one or two Member States the animals are always unloaded and clinically examined. One Member State also has a 24-hour service besides good accommodation at its frontier posts.



## BULK TRANSPORT BY SHIP

### General

Bulk transport of live animals by ship to and from EC Member States is generally confined to carrying cattle and horses. The transportation of horses in particular has been rather subject to criticism in the past by the organisations for the protection of animals. The quality of this transportation has improved of late, so far as one can gather. This is probably partly due to the fact that veterinarians are also currently travelling on board during long sea voyages, and that one of the major ports of entry for horse imports now boasts newly built stalls.

### Export points

The collection points for bulk transport by ship are situated at the ports. This has the advantage that the animals do not need to make an additional trip in cattle trucks.

Every collection point has a considerable reception capacity and can take up to 600 to 800 head of stock. With larger consignments the supply of animals is planned to allow part of their number to have been loaded on board before the rest arrive alongside.

The collection points are fitted out with an inspection platform, reliable lighting, adequate ventilation, weighing equipment, and facilities for feeding and watering in each section as well as for loading and unloading properly.

The stalls provided are usually partly under cover and partly out in the open.

### Fitness to travel

#### inspection

This is applied everywhere. Unfortunately this fact was not confirmed by judging from exports but had largely to be gathered from talking to veterinarians, exporters and other people involved.

Vessel quality

Undoubtedly so far as carrying animals is concerned the most important item on board is the ventilation. Vessels nowadays are equipped with a capacity of at least 30 airchanges an hour. This is amply sufficient. Normally this ventilation capacity is known for every ship. Nevertheless the ventilation is checked every time before loading. The lighting is satisfactory. There are some doubts as to the gradient and slipperiness of the ramps between decks that are used on practically every ship. Generally speaking they are too steep and too slippery. Feed and water troughs are present on board in every compartment.

Most of the Member States regularly involved with this form of transport operate an approval system for ships that are intended for bulk transport.

Loading

Loading takes place without incident. This is probably mainly because with transport by ship, as compared with transport by road, you get little or none of the immense pressure in terms of the amount of time available.

Maximum loads  
and separation

The veterinarian generally checks the load after the animals have been put on board. Attention is paid to the number of animals per compartment and whether there is sufficient room to accommodate animals that become ill or get injured once the ship is under way. As a rule the capacity of the ships is well known because it is always these same specialist vessels that provide this transport.

Identification

It seems from the checks made that no problems occur so far as identification is concerned. Animals without identification are not shipped.

Hours of work

The timing of the departure of a bulk transport by ship can depend on the weather and the tides. In such cases the veterinarians gear the hours they work to the time when the ship leaves.

ROLL-ON ROLL-OFF TRANSPORT

General

The roll-on roll-off transportation of animals is done using cattle trucks which spend part of the journey in the hold of the ship.

Because of their location in respect of the rest of Europe some Member States are mainly committed to ro-ro transport.

Those particular Member States have frequently drafted regulations that go beyond the provisions of EEC Directive 77/489.

So far as the loading, unloading and separation of the animals are concerned this form of transport is no different from the ordinary transport by road. How cattle trucks are stowed once on board ship does, however, entail a number of extra problems.

Export accommodation

The accommodation for ro-ro export transport is usually within a radius of no more than about 18 miles from the port, although it can be further away in some cases. These export facilities are well equipped to receive the animals and for feeding and watering them. The lighting is good and the ventilation is satisfactory as well. Some of these facilities have no loading-bridge, however. Litter, feed and drink are on hand. There can be a problem if ships are unable to leave at the appointed time.

There is usually not sufficient capacity in this type of facility to accommodate more than one shipment at a time. Practical ways are normally found of solving this problem.

Fitness to travel  
inspection

The "fit to travel" inspection is a good one as a general rule. In addition some Member States also operate criteria such as live weight for the selection of animals.

Quality of  
cattle trucks

The cattle trucks used in roll-on roll-off transport are subject to inspection in most Member States. This may or may not be on a legal basis. A number of additional requirements for these trucks have been drafted with this inspection in mind. For example, the chassis has to be fitted with attachments for belaying the truck on board ship.

The cattle truck also needs to be provided with a larger than normal ventilation capacity. This can actually consist of mechanical ventilation. As a result the quality of the cattle trucks undertaking this form of transport is generally speaking very good.

Quality of ships

Unlike bulk transport ships roll-on roll-off vessels are not specifically fitted out to carry live animals. This is evident from, among other things, the fact that the ventilation is mostly of a limited capacity. The first in, first out system that ro-ro works on means that on every occasion there will be one time when the animals will get to be stationed in the exhaust fumes from the other vehicles.

Preventive measures

With this form of transport there are a number of factors that influence the quality of the shipment.

Fistly, there is the anticipated windspeed and height of the waves. Secondly, there is the content of the rest of the ship's cargo. Depending on the size of the ship, problems can arise with windspeeds in excess of force 7. In cases where there is some doubt the captain of the ship has been known to leave it to the driver of the truck, or the carrier, to decide whether their animals should travel with the ship or not. This is a wrong way of doing things. The size of the problems varies and also depends on the number of levels on which the animals are stacked in the lorry and where it is stowed on board.

There will have to be more of an indication as to whether the most stable position on board at windspeeds in excess of force 6 should be preferred to a position next to the ventilators. It is very important that when live animals are being carried there should be no refrigerator trucks, or only a very few, in the same hold. This is on account of the oxygen supply. Veterinarians are not normally in attendance when the trucks are being loaded onto the ship.

## TRANSPORT BY TRAIN

### General

Transport by train, particularly over longer distances, is probably the best form of transport so far as the welfare of the animals is concerned. This is due to the low maximum loads, the good quality of the waggons and the oportunties for feeding and watering.

Train shipments only occur in three Member States.

Besides the advantages of train travel there are also some disadvantages. Firstly, the journey takes much longer than by road so that for the middle distances rail transport often cannot compete with road transport on an economic basis.

Over shorter distances the welfare advantage is frequently outweighed by the stress brought on by two extra lots of loading and unloading. On top of this the international transportation of animals is largely in the hands of owner-drivers.

These are live animal exporters who also provide the transport themselves. They are only prepared to switch to another form of transport if they are going to earn more by doing so, in other words, if it is cheaper transport.

In some instances transport through non-member countries is only permitted if it is by train. Switzerland, Austria and Yugoslavia are cases in point. An additional problem with Yugoslavia is that after the ban on cattle trucks travelling more than 250 miles through Yugoslavia (thus effectively putting other Eastern European countries out of range) there were sweeping rises in the price of rail transport. This increasingly threatens one Member State with being cut off overland from the rest of the European Community.

#### Export accommodation

Use can be made of the export accommodation for road transport. Some Member States do, however, make accommodation available on the platform. This is generally not as well fitted out as the other export facilities. This is mainly because of the only occasional use that is made of this form of transport. It is possible at some of the places visited to unload the animals straight from the waggons onto the platform. There is sufficient lighting everywhere. At one export facility the current can be switched off on the overhead line and the waggons can then be hosed down to cool off when it is very hot. A loading bridge is not always present.

Fitness to  
travel inspection

In general the fitness to travel inspection is well carried out.

Waggon quality

All the railway trucks are specially fitted out to carry live animals on one or two levels. The ventilation provided is amply sufficient and there is also enough equipment on hand for keeping the animals separate and tying them up.

Loading up and stowing

There are different ways of loading up. Loading via the platform is done with the aid of a ramp. No problems have been found with this method. If loading up is not done via the platform then problems do occur. The cattle truck is manoeuvred up against the open doors of the train and you can then get problems caused by the animals missing their step or losing their footing on the short steep ramps, possibly resulting in injuries.

The way the animals are stowed in the railway waggons is generally much easier on them than in lorries, and they are well separated.

Frontier posts

All the frontier posts visited that dealt with animals being imported or in transit provide excellent accommodation. Normally speaking they have pens, loading and unloading platforms, lighting, cover over the platform and litter in the pens. The animals were let out, fed and watered at all the places visited. The frontier post have a more or less permanent complement of veterinary staff.

## TRANSPORT BY AIR

### General

Besides the agricultural stock that travel from Europe to non-member countries for breeding and production purposes there is also a large influx into the Community to creatures from non-member countries. This particularly relates to exotic birds, including parrots, and to monkeys, fish and various other animals that may or may not be endangered species. Because of the intercontinental nature of air transport there are a great many international organisations such as CITES (\*1), OIE (\*2) and IATA (\*3) that already operate in this field on the basis of regulations or recommendations. There are the international and national rules and regulations on this subject as well. This makes the whole subject quite a complicated one for all those involved including the agencies with responsibility for checking. If the procedure in practice is to function better in the future these regulations need to be brought in line with one another.

### Export accommodation

Export accommodation can be in the immediate vicinity of the airport but can also be much further afield. These facilities are often used for road transport as well. In one single instance an airport is fitted out as export accommodation.

### Fitness to travel

This inspection take place in the export accommodation. In a number of cases a fit-to-travel inspection takes place at the airport as well, although this is only possible at airports that have good facilities.

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(\*1) Convention on the International Transport of Endangered Species.  
(\*2) Office International des Epizooties.  
(\*3) International Air Transport Association.



The fitness to travel inspection is generally carried out at the same time as the veterinary inspection.

Problems were found in one Member State where the official veterinarian is not allowed to work on site at the airport when live animals are being exported. This means that the veterinarian cannot supervise the loading of the animals into the container or aircraft.

In a number of Member States the official vet comes in weekends or during the night if necessary for the export of live animals. Normally speaking imports are kept waiting until the following morning.

#### Quality of aircraft

There are two types of transport by air - as full load in cargo-planes, and as palletised or container freight which is mostly carried in dual purpose aircraft. These carry both passengers and cargo on the main deck. Cargo-planes generally stow live animals on the main deck only. The ventilation is not always adequate. One reason for this is that the aircraft used can be quite ancient. Ventilation capacity differs from plane to plane, even within the same make of aircraft.

Capacity tends to be established on an empirical basis. This means that the air companies keep on loading in more and more animals until they think they've reached the limit (dead animals). The animals can be stowed on board singly or at large, separated by partitions, and on pallets.

In the dual-purpose planes animals are stowed on the main deck and in the belly-hold. The main deck is normally provided with ventilation and usually can quite easily take 1 or 2 or more pallets of live animals, depending on the type of aircraft. The belly-holds may or may not be provided with ventilation. This depends on what purpose the airline has bought the plane for. Ventilation in the belly-hold is often optional. Pallets with live animals are regularly carried in unventilated belly-holds as well. Here too the empirical method is used to establish how many animals can be transported in certain holds of a certain size without forced ventilation. It partly depends on the volume of the cargo-space, the temperature, the species of animals, the air leakage through doors, etc. etc.

Loading up, separation  
and stowage

Animals can be loaded onto aircraft in containers or straight into the plane. It depends on the species of creature being carried, the type of aircraft, the on-the-spot accommodation and the airline. There is nothing particular to report so far as the actual loading up is concerned. It is a regular occurrence with split charters for animals of different species to be stowed together in contravention to Article 5a of the Annex to E.C. Directive 77/489.

Supervision of the loading and the stowage is carried out by the official veterinarian or someone else who has been authorised to do so. In one Member State certification occurs at the export accommodation and no checking is done out at the actual airport.

Communication

There not only needs to be advance warning given that live animals are due to arrive. There also needs to be a system for giving advance warning from the district of origin that the export of live animals via the airport is due to take place.

On the whole communication was good at the airports visited and complied with these requirements.

Airport accommodation

One can divide up the airports in Europe into international airports with transportation of live animals on a regular basis, international airports where there is little or no transportation of live animals, and national or regional airports. It is only in the first category that there are a number of airports provided with good accommodation. A small number of airports have a room or a bit of the hangar that can be made available in an emergency as accommodation for animals. The remaining airports have no accommodation at all.

Opening times

Air traffic does not restrict itself to 8 hours a day. The agency responsible for checking is therefore required to have a very flexible attitude to work times. Generally speaking the responsible authority goes along well with this and the work at airports also goes on outside office hours.

Inspection of  
protected animals  
on importation

Checking on the health and fitness to travel of animals that are protected by the Convention on the International Travel of Endangered Species (CITES), or Washington Convention as it's also called, is a problem.

In past years there has been a dispute about competence in various Member States regarding who ought to be carrying out the checks on the transport of these animals. The CITES controller is responsible for the identification of the animals and for checking the permits needed to be able to import the animals.

The authority charged with the transportation of animals and animal disease prevention usually finds it very inconvenient - and this goes for the animals as well - that two sets of checks are carried out. These checks are not geared to one another and can even overlap. In addition there are sometimes conflicts of interest. For example, animals are claimed and taken away while the health papers are still not in order and the animals ought to stay in quarantine until these documents that are required are to hand. This "competition dispute" will intensify now that the E.C. delegation to the Convention has unanimously voted in favour of a proposal whereby the competent CITES authority will also have to carry out the checking on the quality of the transport, including how shipments are packaged and stowed.

In this context they will also have to undertake the checks on health documents, fitness on arrival, etc. It is necessary for the Commission to decide who controls what so as to prevent a duplication of effort or double checking of one another's work by the agencies who do the checking.

## CONCLUSIONS

### Transport Certificate

- Some Member States fail to provide a transport certificate for the transportation of those animals requiring one.
- The requirement that the certificate be drawn up in several languages causes difficulties, including that of a certificate which is too large to be practical.
- Some Member States wrongly consider transport on their territory, whether as far as the frontier point or collection point or from the frontier point to the final destination, as domestic transport.

In such cases the animals are not accompanied by a transport certificate. Furthermore, no new certificate is issued in cases where animals are transferred to another means of transport.

- The transport certificate is sometimes not issued in respect of transport to non-member countries. The transporter also usually decides to retain the certificate.

### Feeding and Watering

- The provisions in EEC Directive 77/489 with regard to feeding and watering are too general and often unworkable.
- Some species of animals can go for quite long periods (more than 30 hours) without food and water. Other animals should be fed and watered after less than 24 hours.
- Most major frontier points have no facilities for the unloading, feeding and watering of animals.
- The official authorities seldom or never carry out inspections of feeding and watering at the frontier.
- In the case of road transport, only animals for breeding and production are given food and water.
- During transport by rail or bulk transport by water, animals are generally offered food and water. In the case of transport by air, this depends on the species of animal in question.

Complaints

- The complaints procedure gives no insight into the incidents which occur daily on the borders between Member States. The Member States usually find bilateral solutions to one-off problems.
- Overloading, identification and ventilation problems in connection with weather or transport conditions are the most common reasons for complaints.

Export accomodation

- This usually satisfies reasonably well the normal requirements with regard to ventilation, lighting, separation, inspection facilities, loading and unloading facilities and capacity.

Means of transport

- The introduction of approval systems has led to the use of reasonably good-quality means of transport. Specific problems do exist, namely as regards the quality of roll-on roll-off ships, the cattle-trucks used to transport animals in this way and certain cargo holds in aircraft.
- The quality of the means of transport is mutually agreed by the Member States, with one exception.
- Means of transport from non-member countries are not always of the same quality.

Inspection

- In most Member States, the welfare inspections are carried out meticulously. In the case of certain Member States, however, the quality of these inspections is doubtful.
- Most problems arise with the inspection of animals from the production process.
- There is only one Member State where inspections are not always carried out.

Transport by road

- Loading usually takes place without incident. The prescribed bridges and ramps are used everywhere. Pigs are sometimes administered a tranquilizer for transportation.
- The Member States use practically every conceivable standard as regards maximum loads. The fact that these standards differ from one Member State to the next is a source of delays at frontier points and complaints.
- In general, animals are carefully marked for identification, but problems do occasionally arise.

- Incorrect identification sometimes results in animals being sent back or destroyed.
- Cows in calf regularly give birth during transportation. Solutions are found, often with difficulty, to ensure the welfare of mother and calf.

#### Communication

- Communication between the Member States where the transportation of live animals is concerned leaves a great deal to be desired.
- The current lines of communication are too long, and the communication equipment in use is usually inadequate. In numerous cases there is no prior notification of the transportation of live animals.

#### Delay at the border

- There is no evidence that consignments of animals are given priority at the border. The longest delays can be put down to customs and technical procedures.
- Delays at the border also depend on the time of arrival. Most frontier points are only open for a limited number of hours. This means that drivers often have to do their job under constant pressure, and this can make for more brutal treatment of the animals.

#### Veterinarians at frontier points

- Veterinarians at frontier points are frequently unable to carry out their work properly. The lack of suitable accommodation, the pressure of work and the absence of any uniform standard of inspection are all factors which hinder their performance.
- The requirement that a clinical inspection must be carried out to ensure the fitness of animals at their arrival on national territory is usually enforced inadequately, if at all; there is one Member State where animals in transit are given only a routine customs inspection in certain cases.
- Veterinarians at frontier points are not always adequately trained for the work.

#### Bulk transport by ship

- Bulk transport by ship is well organized. Accommodation is of an adequate standard and the quality of most ships leaves nothing to be desired.

#### Roll-on roll-off transport

- Roll-on roll-off transport encounters problems where loading the ship is concerned. The position on board, the other contents of the ship's hold, the weather conditions and ventilation all influence the welfare of the animals during transportation.

- The official veterinarian is not usually present during the loading of the ship.
- In some Member States additional requirements have to be met by the cattle trucks used for roll-on roll-off transport.

#### Transport by Rail

- Rail transport causes less stress to the animals and offers good facilities, good-quality waggons and greater ease of feeding, watering and inspection.
- Where rail transport over short distances is concerned, the disadvantages arising from extra work in loading and unloading perhaps outweigh the advantages.
- Loading poses problems if there is no loading platform or if it is not used.

#### Transport by Air

- Transportation of animals by air is generally of good quality. This is partly due to the economic value of the animals.
- Accommodation at airports is in many cases unsatisfactory for the reception, feeding and watering of animals, and is in some cases absent altogether.
- Transport in so-called belly-holds is far from ideal if there is no ventilation. Most belly-holds are difficult or impossible to reach during flight.
- The loading of aircraft is not always supervised.
- Checks to ensure the protection of exotic species of animals and inspections of the health and welfare of these animals are usually carried out by different authorities. This results in the duplication of efforts and conflicts of interest.

### RECOMMENDATIONS

#### Certificate

The current transport certificate is drafted in too many languages and therefore too long. As introducing an extra certificate would only further complicate the procedure, the text of the certificate should appear in full on the health certificates, even where these have not been harmonized.

It would be sensible to waive the obligatory issuing of a transport certificate for horses not intended for slaughter.

This should be in line with the recommendations submitted to the Commission by an expert working party in the early 1980's.



Given the regularity with which problems arise with regard to the transportation of poultry, serious consideration should be given to the possibility of introducing an obligatory transport certificate for this species.

The problems encountered when filling out Section C and inspecting this will be dealt with below, in the section on "Feeding and watering".

Lastly, the Commission will, in the short term, have to decide on the official requests submitted years ago by several Member States for exemption from the obligations laid down in Article I of the Annex to Council Directive 77/489/EEC. Exemption can be granted under Article 7 of that Directive.

#### Feeding and watering

When seeking a solution to the problems of feeding and watering, a number of factors should be taken into account :

- the species
- total transportation time
- monitoring implementation.

#### The species

The current provisions regarding feeding and watering are based on the assumption that most species of animals can be transported without food and water for the same length of time. Factors such as climatological conditions, the animals' ages and the means of transport are not taken into account when calculating transportation time.

Yet some species react differently to others when food and water are withheld, whilst yet others should ideally be given only water. In the case of poultry, feeding and watering during transport are virtually impracticable. The question of how long each species can be transported without feeding and/or watering will therefore have to be resolved through scientific research.

#### Total transportation time

Domestic transport should be included when calculating total transportation time. Distances travelled within the consigning country can, after all, be considerable. The time of feeding and watering prior to or at the beginning of transportation should be indicated on the certificate.

The notion "reasonable period" should be more closely circumscribed, since the current definition only adds to the confusion and allows scope for differing interpretations.

In this context, six hours could be considered as a "reasonable period". This sets the maximum transportation time between one feeding and watering and the next at thirty hours.

This maximum transportation time may, in certain cases, be exceeded. Scientific research will determine under what circumstances this can be allowed. The Member States will of course be free to formulate stricter rules, laying down shorter transportation times.

#### Implementation and Monitoring

Animals can be fed and watered at places designed by the transporter in consultation with the veterinarian issuing the certificate. If this is to take place at fixed points, then perhaps the premises used for health and welfare inspections in the country of destination could provide the location. When feeding and watering take place at fixed locations, the animals will inevitably need a period of rest (still to be determined). Besides the effort involved, the additional unloading and reloading cause considerable stress.

When animals are being fed and watered at these places, different consignments should be kept separate and there should be sufficient space to avoid bottlenecks.

These activities could be permanently supervised or monitored by means of random sampling. In the latter case, monitoring could even be carried out by the Commission.

Inspecting the feeding and watering of animals in cattle trucks requires the physical presence of an inspector. Trucks should in these cases be equipped with (removable) troughs or drinkers and a water tank.

The official responsible should supervise feeding and watering whenever a cargo of animals arrives at a place designated for that purpose by the country of transit or destination. The competent authority or the Commission should assure the standard of these activities by means of random checks.

If a monitoring system of this type is not chosen, there remains only one other possible solution to the problem. Where journeys are likely to last for more than 30 hours without the animals being fed and watered because, given the means of road transport, this is not feasible and/or impossible to verify, the transportation of animals by truck should not be permitted.

Possible solutions such as those proffered here should be submitted for deliberation to a working group of experts from the Commission, which should then come up with specific proposals on this matter.

Abolition of the transit check

The transit check provided for in Article 2 of Council Directive 81/389/EEC to ensure the welfare of animals entering a Member State's territory can, in so far as it ever takes place, be abolished.

Reasons

The two main reasons for abolishing the transit check are as follows :

- Only in a few cases does the check in itself do anything to improve the quality of transport conditions, whilst the delay at the frontier, whether short or long, does, to a greater or lesser extent, have a negative effect on the welfare of the animals.
- The fact that facilities at the border are usually inadequate may deter the authorities from deciding to take action. This can result in officials not daring to take any measures, or not taking the right ones.

Conditions for discontinuance

The compulsory transit check can only be abolished if the following conditions are met. The compulsory welfare inspection in the country of destination must be maintained. There is, however, no reason why this inspection should have to take place immediately on entry into the country.

The inspection could be carried out at the place of destination or at another place to be determined by the country of destination. Continued provision must of course be made for the random "en route" checks which are now current practice.

Another condition which must be met before the transit checks at the frontier can be abolished is that a better guarantee of quality must be given at the time of the departure of international consignments. This could be achieved by introducing minimum standards for means of transport and maximum loads for each species.

#### Inspection at the external frontiers of the EEC

Once the internal frontiers have been removed, there will be a greater need for good quality inspection at the external frontiers of the Community. Under the existing arrangements for swine and cattle imported from non-member countries, inspections can only be carried out at frontier posts which have the necessary equipment at their disposal. This means that animals from non-member countries can only be imported via approved frontier posts.

On arrival at these frontier posts, it should be decided whether the animals are to be fed and watered on the spot, taking account of the final destination and the expected maximum transportation time.

#### Harmonized maximum loads

Differences of opinion over the correct interpretation of Article 4(a) of the Annex to Council Directive 77/489/EEC have, on several occasions in the past, led to problems at the frontier.

Despite bilateral solutions being found to these problems, the Member States can never reach an agreement as to the interpretation of the said Article. I believe that if that section of the Directive is to have proper effect, a working party must submit proposals which will put an end to these constant differences of opinion. The working party could restrict its work to drafting standards for solipeds, cattle, sheep, goats, pigs and poultry. These standards could be presented in the form of recommendations.

#### Solving problems

##### Specific problems

Specific problems arising from inspections carried out to ensure the welfare of animals during transport should, wherever possible, be settled bilaterally at regional level.

Independent problem-solving is only possible if the regional services have a reasonable means of communication at their disposal, such as telefax and telephone. In order that the authorities can supply each other with timely information, a copy of the certificate issued could be sent by telefax to the Member State of destination.

That Member State would then be in a position to check in advance that the certificate had been filled in correctly and would have an extra means of uncovering any fraudulent changes to the certificates. This would also help to reduce to a minimum any delays at the place designated by the country of destination.

Problems relating to animal welfare should never be solved by sending the animals back to the country of origin. In other cases, too, sending animals back can only be justified after all other solutions have been tried and have failed. Animals can only be sent back after a number of days' rest.

Procedure under  
Article 6

Problems between Member States have arisen regularly during recent years. These problems recur fairly regularly, each time with renewed relevance and each time they seem insoluble. The underlying cause can be found in differences of opinion and conflicts of interest.

Although solutions are rarely found to these problems, the Member States seldom follow the procedure set out in Article 6 of Council Directive 77/489/EEC.

In my opinion Article 6(1) has the effect of slowing down decision-making. Calling in the Commission may well have a deterrent effect.

Member States that disagree over what measures should be taken must be able directly to ask the advice of veterinary experts. Besides Article 6(1), which needs to be revised, Article 6(3) also requires further elaboration, so that each Member State can designate one or two experts to be placed by the Commission on a list.

In that way, both parties could, after consultation, directly call in one or more experts who could then advise them on a possible solution to the problems.

Quality of the work

There is a room for improvement in the quality of the work carried out by the official veterinarians. Firstly, veterinarians with little or no experience of this specific field of work should receive training and guidance. It would also be advisable for the work in question to be carried out by veterinarians employed by the State on a full-time basis.

It would be difficult or impossible for practising veterinarians, paid piecemeal for each consignment of animals inspected, to carry out work of the same quality. If strict standards and high quality requirements have to be satisfied, commercial firms will lose little time in calling in those veterinarians who apply somewhat lower standards. A loss of earnings could be involved.

Annexes to  
Directive 77/489/EEC

The Annex to Directive 77/489/EEC is in many respects out of date. More attention should also be paid to the problem areas pinpointed in this report.

A working group could screen these provisions and submit amendment proposals to the Commission.

Commission of the European Communities

FIELD STUDY  
INTO THE STUNNING  
OF  
SLAUGHTER ANIMALS

C O N T E N T SP A R T 2      **FIELD STUDY INTO THE STUNNING OF SLAUGHTER ANIMALS**

	<u>Page</u>
I      Introduction	39
II     Directive 74/577/EEC	39
III    Approach	40
IV     Results per country	40
V      Summary of the findings per animal species	40
VI     Inspection/approval of equipment	45
VII    Maintenance	45
VIII   Training of stunning operatives	45
IX     Supervision	45
X      Recommendations	45

ANNEXES

Annex I	Number of slaughterhouses visited per country and species of animal	50
Annex II	Method of stunning per animal species	51
Annex III	Voltage, amperage and stunning time with pigs for all the stunning equipment seen in operation	52



P A R T 2

FIELD STUDY INTO THE STUNNING OF SLAUGHTER ANIMALS

I. Introduction

This report has been commissioned by the European Commission and has been the responsibility of Drs.P. van Houwelingen (M.A.), Veterinary Inspector in the animal welfare and health care section of the Veterinary Service of the (Dutch) Ministry of Agriculture and Fisheries, who were asked to carry out this work. Drs.A. van Sprang and Ir.S.J. Beukema, both members of the Veterinary Service, helped with this report.

The idea behind the Dutch Veterinary Service's brief is to see whether the current directive on stunning (Directive 74/577/EEC) sufficiently guarantees the welfare of the animal. Chapter II discusses the text of the Directive. Chapter III tells how we approached this study brief and carried it out. Chapter IV gives an overview of the results per country and Chapter V sums up the findings per animal categorised under the headings specifically looked at. Chapters VI to IX discuss the inspection, approval and maintenance of the stunning equipment used, the training of those who perform the stunning and of those who supervise it.

Chapter X gives recommendations for amendments to the directive per animal species.

II. Directive 74/577/EEC

The directive speaks of stunning in fairly general terms. Article 1 says that animals for slaughter must be stunned. It also says that the stunning may be effected by a mechanically operated instrument, electricity, or gas anaesthesia, and that the animal must be spared needless suffering.

The competent authority in accordance with national legislation is to ensure that stunning is performed by means of equipment approved for the relevant species and that it is used correctly. The person using it should have the necessary qualifications and knowledge (Article 2). Derogations from the Directive may be granted but stunning must still take place and in such a way that any cruel treatment of the animal is avoided (Article 3).

Finally, Article 4 provides that special methods of slaughter required for religious rites shall still be a matter for national regulation.

### III. Approach

The Veterinary Service asked all the Member States to help them carry out their brief. This request was backed up by a letter from the Commission to the Member States. At the same time a questionnaire was sent out with these letters. This contained questions regarding the legislation relating to the stunning of slaughter animals, supervision, the methods allowed and those used. All the Member States were visited for about a week in the period from April to October 1987. They were asked to put together a programme of visits to slaughterhouses. This was done by all countries. The programme was occasionally altered during the prior discussions, mostly at our request.

Annex I gives the number of slaughterhouses visited in each country, broken down according to animal species and Annex II gives the method of stunning per animal species.

Besides viewing stunning as such the visits also looked at how the animals were treated from the time they arrived at the slaughterhouses to when they were stunned. Many abattoirs slaughter more than one animal species. Often only one kind of animal could actually be seen being slaughtered at each slaughterhouse. However, one could in fact also get an impression of how the animal species that were not being slaughtered at that time were housed and stunned.

### IV. Results per country

Generally it can be said that so far as the stunning methods used in practice are concerned there are quite a few similarities between the Member States. There is not much difference either, in terms of legislation, as regards the methods permitted. In practice the biggest differences occur with the stunning of pigs. This relates to the method of stunning and whether it is electricity or gas.

In one country the puntilla is still allowed for stunning cattle and sheep.

### V. Summary of the findings per animal species

#### 1. Cattle

##### 1.1. Arrival/unloading point

In virtually all cases the animals are unloaded via unloading platforms or they get down from the trucks themselves. In most cases they are moved on with a stick or a goad; this is only rarely done on a neck halter.

1.2. Lairage

Drinking facilities are usually present. In a number of cases where the animals stay overnight they are stabled on straw.

1.3. Moving animals to the stunning place

In most cases use is made of a goad or a stick. The animals are not always equally docile. Whether they are depends partly on what method is used.

1.4. Restraint

In virtually every case cattle are restrained in a (stunning) box. In a number of cases it is possible to adjust the length or width, but these options are hardly ever used. There are occasionally facilities for restraining the head. This restraint entails making it no longer possible for the head to be brought down and rendering the head immobile because the neck is fully stretched.

1.5. Stunning

In virtually all Member States a human killer (both with percussion cap and pneumatic) is used. In one single case use is made of a puntilla.

Cattle are almost always stunned through perforation of the frontal bone. In a few instances they are shot in the neck. This is because of wanting to keep the brain intact for consumption.

1.6. Bleeding

The time that elapses between stunning and bleeding varies from 20 seconds to about 3 minutes. In a number of cases a "pithing cane" is used.

2. Calves (cattle < 300 kg)

2.1. Arrival/unloading point

Generally speaking, unloading can be said to happen via an unloading platform. The animals are usually moved on to the lairage with sticks and goads.

2.2. Lairage

There is mostly no straw where the animals are housed. Drinking facilities are usually provided.

2.3. Moving animals to the stunning place

A goad or a stick is generally used to help with moving the animals to where they are to be stunned.

2.4. Restraint

The calves are usually restrained in a (stunning) box. There is sometimes additional restraint so that the animal is clamped or its head is restrained. The animals are sometimes driven into a place in groups and stunned one after the other.

2.5. Stunning

Stunning is done with a humane killer, both with percussion gap and pneumatically, or electrically. In a number of cases a neck shot is applied. In that case a second shot is sometimes necessary to obtain proper stunning. Mostly, however, the shot is a frontal one.

2.6. Bleeding

The time that elapses between shooting and bleeding varies from 5 to about 50 seconds.

3. Horses

3.1. Arrival/Unloading point

Generally speaking the horse is fetched out of the truck on a halter.

3.2. Lairage

Drinking facilities are provided in the stall.

3.3. Moving to the stunning place

The animals are led on a halter to the place where they are stunned.

3.4. Restraint

There is no restraint. The animals are led into the place by hand and then shot.

3.5. Stunning

Stunning is generally carried out using a humane killer. The animals are brought in quietly and the fact that they are also approached quietly generally means that the work proceeds well.

3.6. Bleeding

The time that elapses between shooting and bleeding varies from 30 seconds to 5 minutes.

4. Pigs

4.1. Arrival/unloading point

Most slaughterhouses have a platform for unloading. In 50% of the slaughterhouses the animals are moved on using a goad. In the other cases this is done by hand or using a stick. The countries differ distinctly so far as use of the goad is concerned.

#### 4.2. Lairage

No straw is used. Floors are mostly solid, occasionally slightly raked. The intake stalls are always divided up into pens, sometimes of varying sizes. Pen capacity varies from 30 to 200 animals in a pen. There is nearly always a drinking facility, and this is certainly the case if animals are staying overnight.

#### 4.3. Moving to the stunning place

Moving the pigs about happens in the same way as unloading. Pigs soon get restless and even savage when being moved, particularly if the goad is used. The way of working of the person driving them is also important so far as any restlessness on the part of the pigs is concerned.

#### 4.4. Restraint

Different methods of restraint are applied, viz:

- restrainer, with electrical stunning
- "gondolas" or cage with carbon dioxide stunning.

In many cases there is however no restraint, but the animals are moved into one pen about ten at a time and then stunned with electric tongs.

#### 4.5. Stunning

In most Member States the majority of stunning is via electricity. In one Member State stunning is almost solely with carbon dioxide, and in another is solely electrical.

##### Electricity

The amperages and voltages used for stunning vary considerably, especially when tongs are used. The stunning time also varies considerably. There seems to be little connection between stunning time and voltage/amperage. Annex III shows this more clearly by giving the technical data on electrical equipment and stunning times.

There are hardly any slaughterhouses where it is possible to read the actual voltage and amperage during the stunning. This is because there are either no meters or they are hidden away. The electrodes are mostly placed on both sides of the head. With automatic stunning the electrodes are passed along the body or are placed on the pig's head. Head to back stunning was mentioned in a few cases.

## CO2

With CO2 stunning it usually takes some 30-45 seconds for the pigs to get into a 60% carbon dioxide mix. The total time spent in the carbon dioxide chamber is about 80-90 seconds. The pigs normally emerge completely relaxed from the carbon dioxide chamber.

### 4.6. Bleeding

The time between the end of stunning and the act of sticking varies from 10 seconds to about 3 minutes. Stunning is taken to be an end:

- on emergence from the CO2 chamber, or,
- with electrical stunning, on removal of the electrodes.

At one slaughterhouse it was noted that a whole single pen of 10 pigs would be stunned before a start was made on bleeding.

## 5. Sheep

### 5.1. Arrival/unloading point

Unloading is usually via a platform. Just hands are used for moving the animals on.

### 5.2. Lairage

In most countries the sheep have straw underfoot. A drinking facility is usually provided and is definitely available if the animals stay overnight. They are sometimes fed as well.

### 5.3. Moving to the stunning place

Here too the animals are moved on by hand. Slaughter lambs can tend to be rather restless, depending on the breed.

### 5.4. Restraint

There is usually no restraint, with the animals being driven en masse into a pen and stunned electrically with tongs. In a few large slaughterhouses the sheep are restrained by a restrainer, then eventually stunned using tongs or pneumatic human killer.

### 5.5. Stunning

When a restrainer is used a voltage of 220 or higher is applied. The stunning time is then 2 to 3 seconds. With electrical stunning the voltage used varies from 70 to 90 V and stunning is normally 5 to 15 seconds.

Nowhere is it possible to read the voltage and amperage. The electrodes are nearly always placed on both sides of the head. There is just one instance where they are on the head and back. In one country sheep and goats are also still stunned with the puntilla.

5.6. Bleeding

The time from the finish of stunning to sticking varies from 5-60 seconds, but is usually around 20-25 seconds.

VI. Inspection/approval of equipment

There are only a few Member States where the equipment which is used for stunning slaughter animals has to be legally approved in so far as the equipment is registered. In a number of countries equipment is checked (half-) yearly by the authorities or a safety inspectorate.

VII. Maintenance

Maintenance of equipment varies enormously. In some cases equipment is dismantled and cleaned daily by the slaughterhouse's own technical service. In others there is unawareness of the most basic cleaning precepts.

VIII. Training of stunning operatives

Those operatives doing the stunning are trained on the spot. The instances of their having to take a proficiency test are very far and few between.

IX. Supervision

The supervision of stunning falls into two categories :

1. Supervision by the plant itself. If animals are not completely stunned this will give rise to complaints by those doing the shackling and cutting since they are very much at risk. What is more, the quality of the meat often suffers as a result.
2. Supervision by the authorities. This tends to be fairly non-specific. There is no standard method of supervision by the supervisors because there are no proper assessment criteria available to them.

X. Recommendations

Articles 1 and 2 of Directive 74/577/EEC are the ones that qualify for fine tuning.

Articles 3 and 4 have not been included in this study - Article 3 is sporadically applicable and Article 4 often has a political nature, with the countries concerned adopting different stances on this.

There are a number of points in the slaughterhouse when an animal is subjected to a certain amount of stress. Stress can generally be seen as a sign of diminished welfare. Stress cannot always be prevented but it can be reduced. The stress points are :

1. unloading the animals at the slaughterhouse;
2. moving them to lairage;
3. moving them from lairage to the stunning place;
4. the restraint of an animal;
5. the method of stunning.

It is desirable both for the welfare of the animals and for ease of stunning that they should be as docile as possible. The recommendations will therefore also deal with the points prior to stunning.

Besides a number of general recommendations there are also recommendations for the different animal species since both the situation prior to stunning and the stunning itself can differ widely according to species. The recommendations made must be seen as an important improvement in the animal's welfare. With each of the aspects of stunning touched on there is an indication of how far the recommendation should be considered achievable in the short term in the EC context. This is based on the situation as it currently exists in the Member States. The letters stand for the following :

H = achievable in the short term  
D = can be discussed, achievable at some time  
N = certainly not achievable for the time being.

Since there is a lack of proper criteria for assessing the quality of the stunning the wish is that the quality of the equipment should be such that effective rapid stunning is possible in accordance with Article 1 of the Directive.

In order for this quality to be complied with it is necessary that technical requirements are developed which could be set for the equipment.

Scientific research will need to indicate which stunning methods can be applied and subject to which conditions. This means that research must, inter alia, fill the gaps for minimum voltage, amperage and carbon dioxide levels in this report. What is more, it is felt that proper criteria for assessing stunning ought to be developed. In view of the small number of slaughterhouses for horses and calves that were visited some reservations need to be made as regards the recommendations that apply to these categories of animal.

#### General recommendations

The following recommendations can be made for all animal species as a whole :

- Every type of stunning equipment ought to be approved and registered, and it should say on the equipment what species of animal it may be used for (H).



- Each item of equipment used should be cleaned and made ready for use on a daily basis (H).
- Every item of electrical stunning equipment (tongs, restrainers) should be checked by an accredited technical bureau at least twice a year to see whether it is functioning correctly (D).
- Humane killers should be completely dismantled at least once a week for checking and maintenance (H).
- A maintenance logbook should be kept which must provide a record of who has carried out checks, the number of equipment, and maintenance specifications (H).
- Carbon dioxide equipment should be checked by an accredited agency at least twice a year to see whether it is functioning correctly (D).
- To prevent losses of quality stunning not being noticed in good time :
  - . meters that give the voltage and amperage should be present during electrical stunning (H);
  - . meters that show the air pressure should be present when a pneumatic human killer is used (H);
  - . meters that show the pressure in the supply tank and in the chamber should be present when carbon dioxide is used (H).
- The meters should be mounted where both those who are doing the stunning and those who are checking can see them in the workplace (H).
- Those who are doing the stunning should be physically capable of doing the work and take a proficiency test. This should be conducted by the official veterinarian (D).
- Supervision of the process of stunning slaughter animals should rest with the official veterinarian (H).

#### Cattle

- Cattle that are present in the slaughterhouse for more than 18 hours should be fed (D).
- Cattle should rest in lairage for at least 2 hours prior to stunning (D).
- Fresh drinking water should be available in the stall (H)
- It should be possible for cattle to be restrained by the head in such a way that there is no difficulty in stunning the animal in the right place (D).
- Cattle that are about to be stunned should not be able to see cattle that are dead (D/N).
- The time between stunning and bleeding may not amount to more than 45 seconds (H).
- Methods allowed (H) :
  - . mechanical (humane killer with percussion cartridges or pneumatic);
  - . electrical.
- With mechanical stunning cattle should be stunned by perforation of the frontal bone where the diagonals between the eyes and the horns intersect on the other side of the head.
- With electric stunning of calves the electrodes should be placed above the eyes on the side of the head (H).
- A humane killer that gets blocked or does not function properly should be completely overhauled before it may be used again (H).

#### Pigs

- Pigs should rest in lairage at the slaughterhouse for at least 2 hours (H).
- Fresh drinking water should be available (H).

- The use of electrical equipment for moving the pigs about should be forbidden (N/D).
- Slaughterhouses should be laid out in such a way that a pig should be able to get to the place where it is stunned without encountering any obstacles en route. (H/D).
- The stunning methods allowed are (H) :
  - . electricity;
  - . use of gas (CO<sub>2</sub>).
- No dead animals should be visible when the pigs are being stunned (D).
- There should be no more than 30 seconds between stunning and bleeding. With carbon dioxide stunning this period should start to be measured as from emergence from the chamber, and with electrical stunning from the removal of electrodes from the animal (H).
- With carbon dioxide stunning the CO<sub>2</sub> percentage at the height of the animal's head when it is in the lowest point of the CO<sub>2</sub> bath should be at least ... (H).
- With electrical stunning at least ... V and ... A should be used (H).
- If stunning is carried out electrically with tongs the electrodes should be placed on both sides of the head just above the eyes (H)
- An animal may only be bled lying on its side or hanging up (H).

#### Horses (donkeys)

- Horses that are present in the slaughterhouse for longer than 12 hours should be fed (H).
- Horses should rest in lairage at the slaughterhouse for at least 2 hours (H).
- Fresh drinking water should be available in the stall (H).
- Horses that stay overnight should be stabled on straw (H/D).
- The horse that is being stunned should not be visible to the horses waiting to be stunned after that particular horse (D).
- The horses waiting to be stunned should not be able to see horses that have already been stunned or killed (D).
- There should not be more than 45 seconds between stunning and sticking (H).
- Methods allowed (H) :
  - . mechanical;
  - . The humane killer should be placed just above or on the intersection of the lines from eye to base of ear on the other side of the head (H).
- A humane killer that gets blocked or does not function properly should be completely overhauled before being used again (H).

#### Sheep (goats)

- Sheep in the slaughterhouse should be housed on straw (D).
- Fresh drinking water should be available (H).
- Restraint should be by means of a restrainer (D/N).
- Stunning methods allowed (H) :
  - . electricity (H);
  - . mechanical by humane killer.
- Sheep that are present in the slaughterhouse for longer than 18 hours should be fed (H).
- Sheep should rest in lairage for at least 2 hours (H).
- The sheep waiting to be stunned should not be able to see animals that are already dead (D).
- The time between stunning and sticking may not amount to more than 30 seconds (H).

- With mechanical stunning the equipment should be placed on the intersection of the lines from eye to ear on the other side of the head (H).
- With electrical stunning the electrodes should be placed either on top of the head or on the side of the head level with the eyes (H)
- A humane killer that gets blocked or does not function properly should be completely overhauled before being used again (H).

ANNEX I

Number of slaughterhouses visited per country and species of animal

COUNTRY	ANIMAL SPECIES					TOTAL
	Cattle	Calf	Horse	Pig	Sheep	
Belgium	3	1	1	3	1	9
Denmark	1			9		10
France	6		1	3	1	11
Greece	2			2		4
Great-Britain	3			4	4	11
Ireland	2			1	2	5
Italy	1			1	1	3
Luxembourg	2			1		3
Netherlands	4	1	1	3	1	10
Portugal	4			3	2	9
Spain	4			4	3	11
West Germany	1	1		3	1	6
TOTAL	33	3	3	37	16	92
%	35,9	3,3	3,3	40,2	17,4	100

It should be noted that in some cases more than one animal species is slaughtered in one and the same slaughterhouse. These slaughterhouses count double in the table.

This table only gives the figures for those seen in operation.

ANNEX II

Methods of stunning per animal species

The following table gives the methods that are used to stun in practice. The figures show the number of slaughterhouses visited where stunning was by a particular method.

Also included are the animal species that were not being slaughtered at the time these slaughterhouses were visited.

Table

Method of stunning	Cattle	Calf	Horse	Pig	Sheep
<u>Mechanical</u>					
humane killer & percussion cap	28	2	2		1
pneumatic humane killer	4	2			1
Pistol	1		2		
Puntilla	3	1			3
<u>Electrical</u>					
Tongs, pen				15	11
Tongs, restrainer				8	2
Automatic, restrainer				7	
<u>CO2</u>				12	
<b>TOTAL</b>	<b>36</b>	<b>5</b>	<b>4</b>	<b>42</b>	<b>18</b>

ANNEX III

Voltage, amperage and stunning time with pigs for all the  
stunning equipment seen in operation

	Voltage	Amperage	Stunning time (seconds)	Method of restraint with electrical stunning	Ability to check technical data
1	55	?	4 to 5	restrainer, tongs	no
2	800	?	2	restrainer, automatic	no
3	600	12	2	restrainer, automatic	yes
4	350	1.25	7 - 10	restrainer, tongs	yes
5	95	4	8 - 10	pen, tongs	no
6	500	4-5	3 - 5	restrainer, automatic	
7	240	1.5	12 - 16	pen, tongs	no
8	110	1	1	pen, tongs	no
9	350	1.25	6 - 8	pen, tongs	yes
10	600	1.25	3	restrainer, automatic	
11	300	1.2	4	pen, tongs	yes
12	220	?	6 - 7	restrainer, tongs	no
13	110	?	10	pen, tongs	no
14	110	?	2	pen, tongs	no
15	480	?	1.7	restrainer, tongs	no
16	350	2.5	6	pen, tongs	yes
17	220	1.25	2 - 3	restrainer, automatic	
18	80	?	10	pen, tongs	no
19	80	?	3 - 4	pen, tongs	yes
20	80	?	5	restrainer, tongs	no
21	250	1.25	1 - 2	pen, tongs	yes
22	250	1.25	1 - 2	pen, tongs	yes
23	180	?	8 - 10	pen, tongs	no
24	70	?	2 - 3	restrainer, automatic	no
25	180	?	10 - 15	restrainer, tongs	no

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