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REPORT ON THE MONITORING AND TESTING OF RUMINANTS FOR THE PRESENCE OF TRANSMISSIBLE SPONGIFORM ENCEPHALOPATHY (TSE) IN 2002

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June 2003

INTRODUCTION

Since July 2001 Member States have carried out an expanded monitoring programme on bovine spongiform encephalopathy (BSE) in cattle. The surveillance not only involves BSE suspects but also includes active monitoring of healthy slaughtered cattle, risk animals such as fallen stock, and cattle with an epidemiological link to known BSE cases. The main purpose of the monitoring programme is to provide a reliable insight into the prevalence of BSE in the Member States. At the same time it ensures that no BSE cases are being slaughtered for human consumption, thus increasing the safety of beef in combination with other measures such as the removal and destruction of specified risk materials.

This report provides an overview of the results of the surveillance in 2002 similar to the corresponding report for 2001 (Report on the Monitoring and Testing of Bovine animals for the presence of BSE in 2001) which is also available on the BSE web-site of the Commission's Directorate General SANCO (http://europa.eu.int/comm/food/fs/bse/bse45_en.pdf)). Apart from some minor changes, the monitoring programme in bovine animals has remained the same since July 2001. It has therefore been possible to evaluate the evolution over one year by comparing the results of the last semester of 2001 to the corresponding results of 2002. Comparisons can also be made between the 2001 and 2002 results within the same target group (e.g. healthy slaughtered cattle) and, preferably, within the same age group. The comparisons seem to indicate that the overall BSE situation is improving, showing that the measures taken in the past are taking effect.

In addition, the report summarises the results of TSE monitoring in small ruminants in 2002. This monitoring was intensified from April 2002 on.

Member States have on a voluntary basis submitted to the Commission monthly reports containing the information needed for the preparation of this report. The compilation of Member State data is important to enhance our understanding of the epidemiology of TSEs and allows us to better identify the future direction our policies should take to protect animal and human health. Therefore, I would like to thank all Member States for their co-operation.

I hope that this report will provide useful data to all interested parties.

Jaana Husu-Kallio

Deputy-Director General

CONTENTS

1. SUMMARY

In 2002, a total of 10.423.882 bovine, 353.330 ovine and 54.444 caprine animals were tested in the framework of the TSE monitoring programme. 2.126 bovine, 1.576 ovine and 41 caprine animals turned out positive. The positive cases in bovine animals were considered as BSE cases, while those in ovine and caprine animals as scrapie.

1.238.617 risk bovine animals were tested by rapid tests and 9.124.887 healthy animals slaughtered for human consumption. 2.658 bovine animals were tested in the framework of passive surveillance (animals reported as BSE suspects by the farmer or the veterinary practitioner and subject to laboratory examination). In addition, 57.720 animals were tested in the framework of culling of animals with an epidemiological connection to a BSE case. 68 % of positive cases were detected by the active monitoring (testing of risk animals, healthy slaughtered and culled cattle) and 32 % were detected by passive surveillance. BSE cases were found in all Member States except Austria, Greece, Finland and Sweden. The prevalence of BSE cases decreased by 20 % in 2002 compared to 2001. This reduction in prevalence and the increasing age of positive cases indicates that measures taken in the past are producing their effect.

350.557 ovine animals were tested by active monitoring, while 2.773 were animals reported as scrapie suspects and therefore subjected to laboratory examination. In caprine animals, the numbers of tests in the respective groups were 54.381 (active monitoring) and 63 (scrapie suspects). The information on the genotypes of positive ovine animals is still limited. The results indicate the importance of active monitoring in small ruminants and the need for further evaluation of TSE susceptibility of different genotypes.

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2. MONITORING PROGRAMMES, SAMPLING AND TEST METHODS

During the year 2002, the **legal framework for the monitoring** of ruminants for the presence of TSE was the provisions of Chapter A of Annex III in Regulation No 999/2001[1] of the European Parliament and of the Council laying down rules for the prevention, control and eradication of certain transmissible spongiform encephalopathies (the TSE Regulation), as last amended by Commission Regulation (EC) No 260/2003[2]. The EU legislation on TSE Monitoring monitoring is summarised in Table 1.

The **legal basis for the sample collection and for the test methods** was Chapter C of Annex X in Regulation (EC) No 999/2001.

2.1 MONITORING OF BOVINE ANIMALS

The monitoring of bovine animals for the presence of BSE was divided into the following target groups:

(1) **Fallen stock**: Bovine animals which have died or have been killed on the farm or in transport, but not slaughtered for human consumption nor killed in the framework of an epidemic. Member States may decide to derogate from this provision in remote areas with a low animal density, where no collection of dead animals is organised. The derogation shall not cover more than 10% of the bovine population in the Member State.

(2) **Emergency slaughtered animals**: Bovine animals subject to "Special emergency slaughtering" as defined in Article 2 of Council Directive 64/433/EEC.

(3) **Animals with clinical signs at ante-mortem**: Bovine animals sent for normal slaughter but the slaughter of which was deferred because they were:

(a) suspected of suffering from a disease which is communicable to man and to animals or showing symptoms or being in a general condition such as to indicate that such a disease may occur.

(b) Showing symptoms of a disease or of a disorder of their general conditions which is likely to make their meat unfit for human consumption.

(as referred to in Directive 64/433/EEC, Annex I, Chapter VI, points 27-28)

Until end August 2002, those animals slaughtered in the context of a disease eradication campaign, but which were not showing clinical signs of any disease, fell into this category.

(4) **Healthy slaughtered animals**: Bovine animals subject to normal slaughter for human consumption and, since end August 2002, animals without clinical signs of disease slaughtered in the context of a disease eradication campaign. Sweden was allowed to test only a random sample.

[1] OJ L 147, 31.5.2001, p 1.
[2] OJ L 37, 13.2.2003, p 7.

(5) **Animals culled under BSE eradication**: birth cohorts (bovine cattle born in a herd within 1 year before or after the birth of a BSE case), rearing cohorts (bovine animals reared together with a BSE case during the first year of their life), offspring and any other animals killed because of an epidemiological link to a BSE case**.**

(6) **Suspects** subject to laboratory examination: Bovine animals reported as suspects of TSE as defined in Article 3(h) of Regulation 999/2001 and subject to the measures described in Articles 12 and 13 of this Regulation.

In the UK, bovine animals over 30 months (OTM) were purchased for destruction pursuant to Regulation 716/96[1]. A part of these animals (see Table 1) were tested and reported as emergency slaughtered animals, animals with clinical signs at ante-mortem or healthy slaughtered animals according to the conditions at slaughter.

2.2 MONITORING OF OVINE AND CAPRINE ANIMALS

The testing of ovine and caprine animals for the presence of TSE was divided into the following target groups:

(1) Healthy animals over 18 months of age which are slaughtered for human consumption or killed in the framework of an epidemic.

(2) Risk animals containing almost exclusively fallen stock, with a few emergency slaughtered animals and animals with clinical signs at ante-mortem which have died or been killed, but which were not killed in the framework of an epidemic or slaughtered for human consumption. In Portugal, animals slaughtered in the context of a disease eradication campaign, were also added and represented about 90% of the animals in this target group.
Between 1 January and 31 March 2002, Member States with a small ovine and caprine population also had the option of sampling animals over 18 months of age whose appearance suggests a chronic wasting condition. Required sample sizes in (1) and (2) for all Member States were greatly increased after 1 April 2002.

(3) Animals culled under scrapie eradication

(4) Scrapie suspects subject to laboratory examination.

2.3 SAMPLING AND TESTING

Samples collected in the context of active monitoring (risk animals, healthy slaughtered animals and animals culled in the framework of TSE eradication) were screened by one of the three approved rapid tests. Confirmation tests from inconclusive or positive results in the active monitoring and analysis of samples from suspects were performed by histopathology or, if appropriate, by immunocytochemistry, immunoblotting or by demonstration of characteristic fibrils by electron microscopy.

[1] OJ L 99. 20.04.1996, p. 14

Table 1: Summary of the EU legislation on TSE monitoring in 2002

	EU Except SV and UK	SV	UK January to end August	UK September to December
Legal provisions	Regulation (CE) No 999/2001 as amended by Regulations (CE) No 1248/2001 and 270/2002	Regulation (CE) No 999/2001 as amended by Regulations (CE) No 1248/2001 and 270/2002	Regulation (CE) No 999/2001 as amended by Regulations (CE) No 1248/2001 and 270/2002 Regulation (CE) No 716/96.	Regulation (CE) No 999/2001 as amended by Regulations (CE) No 1248/2001, 270/2002 and 1494/2002. Regulation (CE) No 716/96.
Bovine animals				
Special emergency slaughtering	All >24 months	All >24 months	All >24 months	All >24 months
Clinical signs at ante –mortem	All >24 months	All >24 months	All >24 months	All >24 months
Fallen stock	All >24 months	All >24 months	All >24 months	All >24 months
Animals slaughtered for human consumption	All >30 months	Random sample comprising at least 10.000 animals >30 months	All > 30 months (a small scheme – BAS- allows the slaughter of animals between 30 and 42 months)	All > 30 months
BSE suspects	All	All	All	All
Other			Animals slaughtered under the OTM scheme All animals >30 months subject to "special emergency slaughter" ,with clinical signs at ante-mortem or born between 1/8/96 and 1/8/97 Random sample comprising at least 50.000 animals of remaining animals >30 months.	Animals slaughtered under the OTM scheme All animals >30 months subject to "special emergency slaughter" ,with clinical signs at ante-mortem or born after 1/8/96 and > 42 months old Random sample comprising at least 10.000 animals of remaining animals (born before 1/8/96).
Ovine and caprine animals				
Animals slaughtered for human consumption	Minimal sample size in ovine and caprine animals > 18 months	Minimal sample size in ovine and caprine animals > 18 months	Minimal sample size in ovine and caprine animals > 18 months	Minimal sample size in ovine and caprine animals > 18 months
Animals not slaughtered for human consumption	Minimal sample size in ovine and caprine animals > 18 months	Minimal sample size in ovine and caprine animals > 18 months	Minimal sample size in ovine and caprine animals > 18 months	Minimal sample size in ovine and caprine animals > 18 months
Other bovine, ovine and caprine animals (including TSE culling and younger animals): voluntary				

3. REPORTS FROM MEMBER STATES

The Commission invited the Member States in the Standing Committee on the Food Chain and Animal Health to provide monthly data on TSE testing on a voluntary basis.

The Commission requested, per species, information on:

1. Positive cases detected during the reporting period: month of birth, target group, diagnostic method used for screening and diagnostic method used for confirmation.

2. Monitoring carried out during the reporting period: number of samples, number of positive results, number of negative results, number of tests pending and age limit for each target group.

3. The results of the epidemiological investigation in BSE cases born after 1 January 1996.

4. Genotypes of confirmed TSE cases in ovine animals.

The above-mentioned target groups were divided into the following categories:

(1) Bovine animals:

(a) Active Monitoring

- Fallen stock
- Emergency slaughter
- Animals with clinical signs at ante-mortem
- Healthy slaughtered animals
- Animals culled in connection to a BSE case.

Fallen stock, emergency slaughtered animals and animals with clinical signs at ante-mortem inspection are considered as "risk animals".

(b) Passive Surveillance

- Animals reported as BSE suspects by the farmer or the veterinary practitioner and subject to laboratory examination.

The age limits used in the Member States in testing different target groups of bovine animals are summarised in Table 2.

Table 2: Age limits used in sampling of bovine animals

	Age limit					
	Fallen Stock	**Emergency slaughtered**	**Clinical signs ad ante-**	**Healthy slaughtered**	**BSE culling**	**BSE suspects**
Belgique/belgïë	> 24 months[1]	> 24 months[1]	> 12 months	> 30 months[1]	> 24 months	No age limit
Danmark	> 24 months	> 24 months	> 24 months	> 30 months	> 24 months	No age limit
Deutschland	Compulsory testing > 24 months, voluntary testing < 24 months				No age limit	No age limit
Ελλασ	> 24 months	> 24 months	No age limit	> 30 months	No age limit	No age limit
España	> 24 months				No age limit	No age limit
France	> 24 months					No age limit
Ireland	> 24 months	> 24 months	> 24 months	> 30 months	> 30 months	No age limit
Italia	> 24 months				No age limit	No age limit
Luxembourg	> 24 months	> 24 months	> 24 months	> 30 months	> 24 months	No age limit
Nederland	> 24 months	> 24 months	> 24 months	> 30 months	No age limit	No age limit
Österreich	> 20 months	> 20 months	> 24 months	> 30 months[1]	No age limit	No age limit
Portugal	> 24 months	> 24 months	> 24 months	> 30 months	> 30 months	No age limit
Suomi/Finland	> 24 months	> 24 months	> 24 months	> 30 months	No age limit	No age limit
Sverige	> 24 months	> 24 months	> 24 months	> 30 months	No age limit	No age limit
UK (Gr. Britain)	> 24 months	> 24 months	> 24 months	> 30 months	No age limit	No age limit
UK (N. Ireland)	> 24 months	> 24 months[1]	> 24 months	> 30 months	No age limit	No age limit

(2) Ovine and caprine animals

(a) Active Monitoring

- Risk animals containing almost exclusively fallen stock with a few tests in emergency slaughtered animals and animals with clinical signs at ante-mortem;
- Healthy slaughtered animals;
- Animals culled in a herd where an animal has been declared TSE positive.

(b) Passive Surveillance

- Animals reported as scrapie suspects by the farmer or the veterinary practitioner and subject to laboratory examination.

At the end of 2002, the Commission invited the Member States to provide data on a voluntary basis on the age structure of the tested bovine animals, separated per semester and per target group. Some Member States provided an estimation of the age structure by checking the age of a random sample of tested animals or by providing figures on the age structure of slaughtered animals.

All this information has been introduced and processed in a database in order to summarise the information provided and elaborate summary tables to be distributed regularly within the Commission and to the Member States.

[1] A limited number of samples were collected in younger bovine animals.

4. SUMMARY OF THE BSE TESTING IN BOVINE ANIMALS DURING 2002

The information was extracted directly from the monthly reports. The monthly information is often updated and/or corrected by the Member States in the following reports. The information shown in the following summaries is updated according to the information received on 31 May 2003.

Information on the population was obtained from Eurostat. The mean population of bovine animals of 2 years and over in June and December 2002 were considered as the mean adult population in 2002. If no data were available from June 2002, only the December 2002 were used.

4.1 SAMPLING

Table 3: Total Testing: tests performed in 2002 per MS and target group

	Number of tests performed						
	Fallen	**Emergency Slaughter**	**Clinical signs ad ante-**	**Healthy slaughter**	**BSE culling**	**BSE suspects**	**Total**
Belgique/België	36.386	1.445	98	408.934	3.277	279	**450.419**
Danmark	34.291	1.680	24	254.668	2.640	38	**293.341**
Deutschland	251.177	6.850	1.585	2.767.958	2.626	346	**3.030.542**
Ellas	1.990	249	17	21.457	22	0	**23.735**
España	83.457	1.661	1.266	454.132	5.473	67	**546.056**
France	271.727	0	0	2.896.182	15.881	207	**3.183.997**
Ireland	76.203	0	2.169	610.002	18.659	511	**707.544**
Italia	55.954	5.104	42.481	623.913	4.034	99	**731.585**
Luxembourg	1.890	48	3	16.443	0	14	**18.398**
Nederland	46.611	10.266	7.444	491.069	3.000	39	**558.429**
Österreich	9.695	3.869	0	215.075	0	4	**228.643**
Portugal	3.305	1.109	9.779	66.721	1.163	150	**82.227**
Suomi/Finland	7.249	9.241	5.843	114.669	0	6	**137.008**
Sverige	23.607	1.788	3	12.073	0	26	**37.497**
United Kingdom	81.431	138.833	789	171.591	945	872	**394.461**
Total	**984.973**	**182.143**	**71.501**	**9.124.887**	**57.720**	**2.658**	**10.423.882**

Table 4: Active monitoring in relation to the total population

	Adult cattle (million)	Risk Animals[1] No. Tests	% Tests/Adult cattle	Healthy Animals No. Tests	% Tests/Adult cattle
Belgique/België	1,5	37.929	2,59%	408.934	27,9%
Danmark	0,9	35.995	4,16%	254.668	29,4%
Deutschland	6,3	259.612	4,13%	2.767.958	44,0%
Ellas	0,3	2.256	0,69%	21.457	6,5%
España	3,4	86.384	2,51%	454.132	13,3%
France	11,1	271.727	2,45%	2.896.182	26,2%
Ireland	3,2	78.372	2,43%	610.002	18,9%
Italia	3,2	103.539	3,25%	623.913	19,6%
Luxembourg	0,1	1.941	1,98%	16.443	16,8%
Nederland	1,8	64.321	3,65%	491.069	27,8%
Österreich	1,0	13.564	1,38%	215.075	21,8%
Portugal	0,8	14.193	1,83%	66.721	8,6%
Suomi-Finland	0,4	22.333	5,47%	114.669	28,1%
Sverige	0,7	25.398	3,55%	12.073	1,7%
United Kingdom	4,9	221.053	4,47%	171.591	3,5%
Total	**39,6**	**1.238.617**	**3,13%**	**9.124.887**	**23,1%**
			Total Tests	**10.421.224**	

Table 5: Comparative active monitoring 2001 versus 2002

	Healthy slaughtered 2001	2002	Δ	Risk animals 2001	2002	Δ	Total active monitoring 2001	2002	Δ
Belgique/België	359.435	408.934	14%	14.710	37.929	158%	377.667	450.140	19%
Danmark	250.414	254.668	2%	22.192	35.995	62%	276.892	293.303	6%
Deutschland	2.593.260	2.767.958	7%	266.786	259.612	-3%	2.860.046	3.030.196	6%
Ellas	15.360	21.457	40%	1.655	2.256	36%	17.110	23.735	39%
España	328.517	454.132	38%	53.581	86.384	61%	385.798	545.989	42%
France	2.382.225	2.896.182	22%	133.889	271.727	103%	2.527.231	3.183.790	26%
Ireland	636.930	610.002	-4%	25.507	78.372	207%	674.633	707.033	5%
Italia	377.201	623.913	65%	65.258	103.539	59%	445.119	731.486	64%
Luxembourg	19.475	16.443	-16%	1.395	1.941	39%	20.872	18.384	-12%
Nederland	454.649	491.069	8%	44.337	64.321	45%	501.544	558.390	11%
Österreich	202.809	215.075	5%	8.752	13.564	55%	211.589	228.639	8%
Portugal	28.384	66.721	135%	8.033	14.193	77%	38.429	82.077	114%
Suomi-Finland	9.882	114.669	1060%	17.960	22.333	24%	27.873	137.002	392%
Sverige	4.433	12.073	172%	23.643	25.398	7%	28.076	37.471	33%
United Kingdom	20.767	171.591	726%	73.912	221.053	199%	95.087	393.589	314%
Total	**7.683.741**	**9.124.887**	**19%**	**761.610**	**1.238.617**	**60%**	**8.487.966**	**10.421.224**	**23%**

[1] Fallen stock, emergency slaughtered animals, animals with clinical signs at ante mortem inspection.

Comments on the sampling

The increase in the number of tests carried out in 2002 by active monitoring compared to 2001 (Table 5), can be explained by the different requirements in legislation since the monitoring was reinforced in July 2001, in particular as regards risk animals. The percentage of tested risk animals and healthy slaughtered cattle compared to the adult population (Table 4) should be interpreted with caution as Member States were running different monitoring programmes (only random sampling in Sweden, the purchase for destruction scheme of healthy slaughtered cattle in the UK without obligatory testing), as additional voluntary testing of younger cattle occurred in certain Member States and as there may be a difference in risk animals, including fallen stock, per year in relation to the population because of different production systems.

4.2 POSITIVE CASES

Table 6: Total positive cases per number of cattle tested or present in the adult population (> 24 months)

	Adult cattle (in million)	Tests			Prevalence[2]	
		No.	Positives	Ratio [1]	Passive	Total
Belgique/België	1,5	450.419	38	0,8	3,33	25,33
Danmark	0,9	293.341	3	0,1	0,00	3,33
Deutschland	6,3	3.030.542	106	0,3	1,77	16,83
Ellas	0,3	23.735	0	0,0	0,00	0,00
España	3,4	546.056	134	2,5	5,00	39,41
France	11,1	3.183.997	240	0,8	3,69	21,62
Ireland	3,2	707.544	333	4,7	33,75	103,44
Italia	3,2	731.585	36	0,5	0,00	11,25
Luxembourg	0,1	18.398	1	0,5	0,00	10,00
Nederland	1,8	558.429	24	0,4	0,56	13,33
Österreich	1,0	228.643	0	0,0	0,00	0,00
Portugal	0,8	82.227	86	10,5	28,75	107,50
Suomi-Finland	0,4	137.008	0	0,0	0,00	0,00
Sverige	0,7	37.497	0	0,0	0,00	0,00
United Kingdom	4,9	394.461	1125	28,5	96,94	229,59
Total	**39,7**	**10.423.882**	**2126**	**2,0**		

[1] Positives per 10.000 bovine animals tested.

[2] Cases over the last 12 months per 1 million adult bovine animals.

Table 7: Evolution of positive cases per trimester of 2002 in the EU

	Number of positive cases			
	1° trim.	2° trim.	3° trim	4° trim
BSE eradication	4	2	5	4
Clinical signs	6	6	6	9
Emergency Slaughter	170	90	104	145
Fallen stock	191	141	137	137
Healthy slaughtered	76	70	68	72
Suspect	228	170	129	154
Total risk animals[1]	367	237	247	291
Total active monitoring[2]	447	309	320	367
Total positive cases	**675**	**479**	**449**	**521**
Total tested	**2.748.080**	**2.412.077**	**2.485.174**	**2.749.430**
Ratio (pos./10.000 tested)	**2,46**	**1,99**	**1,81**	**1,89**

[1] Fallen stock, bovine animals with clinical signs and emergency slaughter.

[2] Risk animals, healthy slaughtered animals and animals culled in the context of BSE eradication.

Table 8: Evolution of positive cases world-wide since BSE was recognised

Country	< 1988	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total
Deutschland	0	0	0	0	0	1[(a)]	0	3[(a)]	0	0	2[(a)]	0	0	7	125	106	**244**
Österreich	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Belgique/België	0	0	0	0	0	0	0	0	0	0	1	6	3	9	46	38	**103**
Danmark	0	0	0	0	0	1[(a)]	0	0	0	0	0	0	0	1	6	3	**11**
España	0	0	0	0	0	0	0	0	0	0	0	0	0	2	82	134	**218**
Suomi/Finland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
France	0	0	0	0	5	0	1	4	3	12	6	18	31[(b)]	162	277	240	**759**
Ellas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Ireland	0	0	15[(b)]	14[(b)]	17[(b)]	18[(b)]	16	19[(b)]	16[(b)]	74	80	83	95	149	246	333	**1.175**
Italia	0	0	0	0	0	0	0	2[(a)]	0	0	0	0	0	0	50	36	**88**
Luxembourg	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	**2**
Nederland	0	0	0	0	0	0	0	0	0	0	2	2	2	2	20	24	**52**
Portugal	0	0	0	1[(a)]	1[(a)]	1[(a)]	3[(a)]	12	15	31	30	127	159	150[(b)]	113	86[(b)]	**729**
Total EU min UK	**0**	**0**	**15**	**15**	**23**	**21**	**20**	**40**	**34**	**117**	**122**	**236**	**290**	**482**	**968**	**1.001**	**3.384**
United Kingdom	442	2.473	7.166	14.294	25.202	37.056	34.829	24.290	14.475	8.090	4.335	3.197	2.281	1.428	1.194	1.125	**181.877**
Total EU	**442**	**2.473**	**7.181**	**14.309**	**25.225**	**37.077**	**34.849**	**24.330**	**14.509**	**8.207**	**4.457**	**3.433**	**2.571**	**1.910**	**2.162**	**2.126**	**185.261**
Island of Man	0	6	6	22	67	109	111	55	33	11	9	5	3	0	0	0	437
Jersey	0	1	4	8	15	23	35	22	10	12	5	8	6	0	0	0	149
Guernsey	4	34	52	83	75	92	115	69	44	36	44	25	11	13	2	0	699
Switzerland	0	0	0	2	8	15	29	64	68	45	38	14	50	33	42	24	432
Rest of the world	0	0	3[(a)]	0	0	0	1[(a)]	0	0	0	0	2[(a)]	0	0	11	17	34
Total world	**446**	**2.514**	**7.246**	**14.424**	**25.390**	**37.316**	**35.140**	**24.540**	**14.664**	**8.311**	**4.553**	**3.487**	**2.641**	**1.956**	**2.217**	**2.167**	**187.012**

Sources: <1997: OIE; From 1997: Systematic notification of animal diseases by MS, completed by monthly reports of the UK and Portugal and, since 2001, of the other MS; websites of the competent authorities and the OIE.

[(a)] All imported cases.
[(b)] Including imported cases: Ireland: 1 in 1990, in 1994 and in 1995, 2 in 1991 and 1992, 5 in 1989; France: 1 in 1999; Portugal: 1 in 2000 and 2002.

Figure 1: Evolution of BSE detected by passive surveillance and active monitoring in the UK

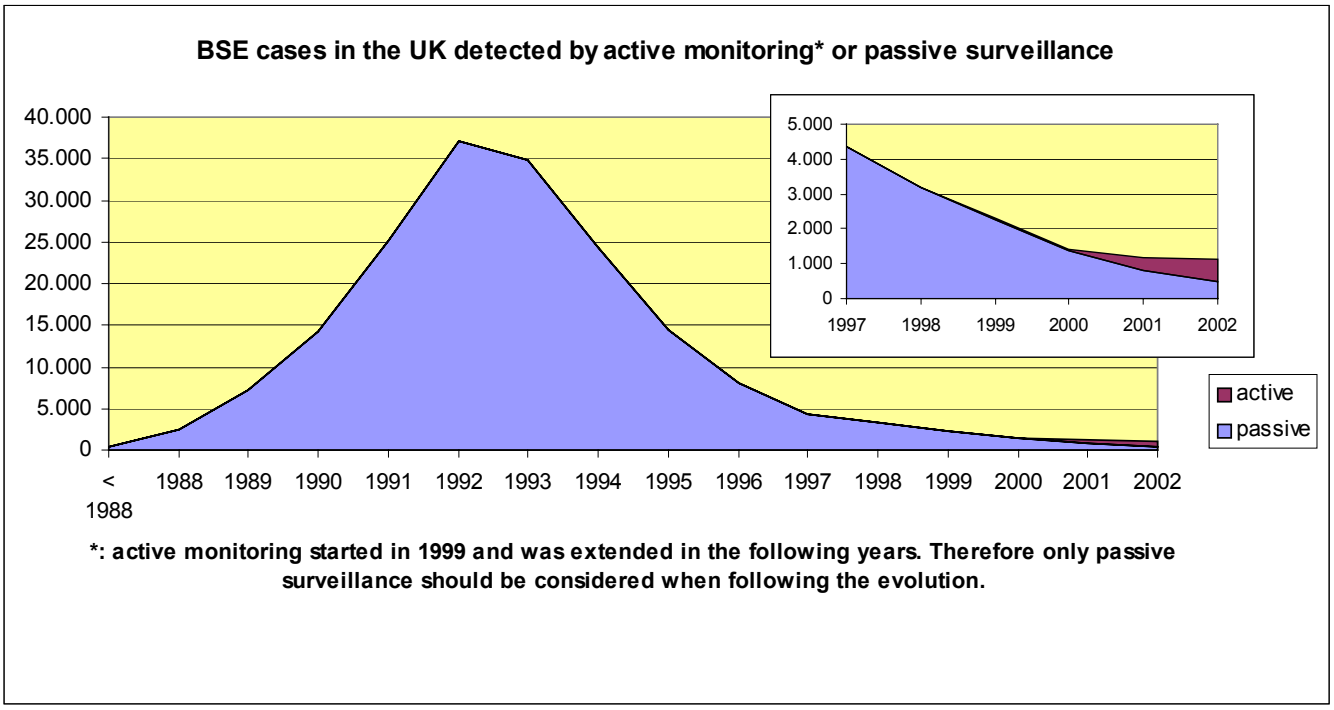


Figure 2: Evolution of BSE detected by passive surveillance and active monitoring in the rest of the EU

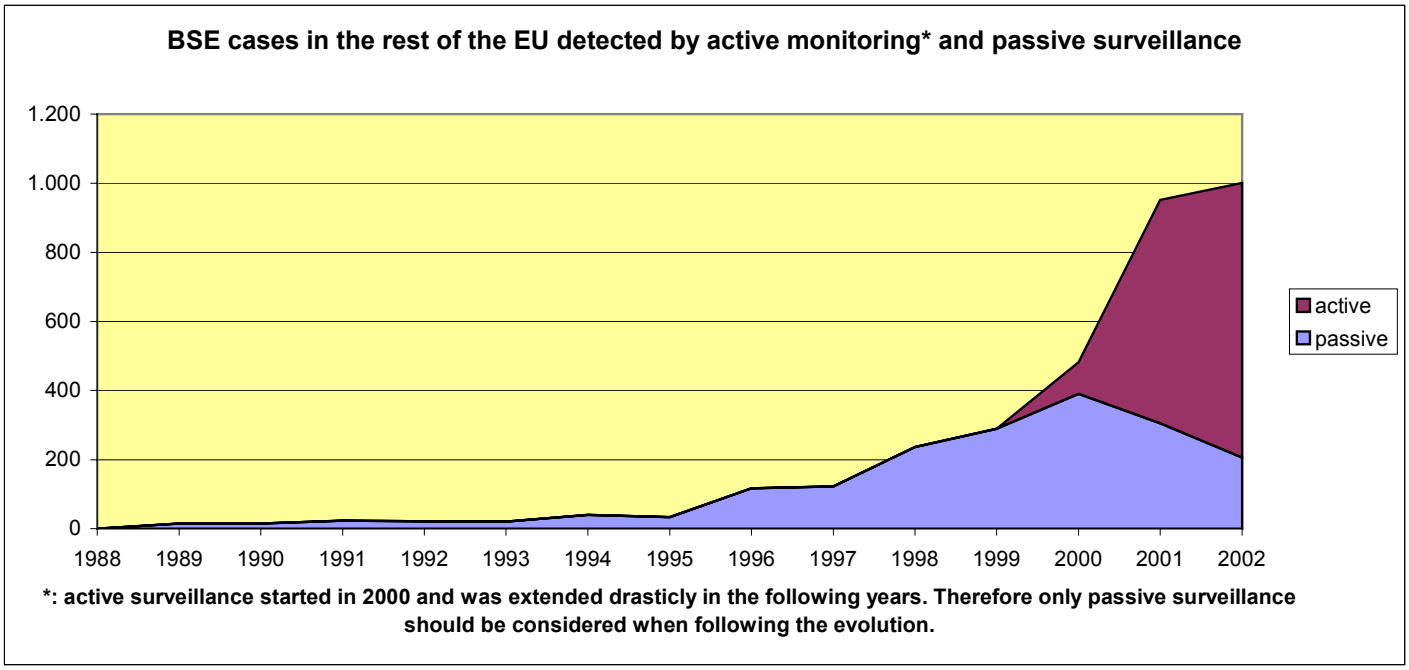


Figure 3: Evolution of positive cases per month

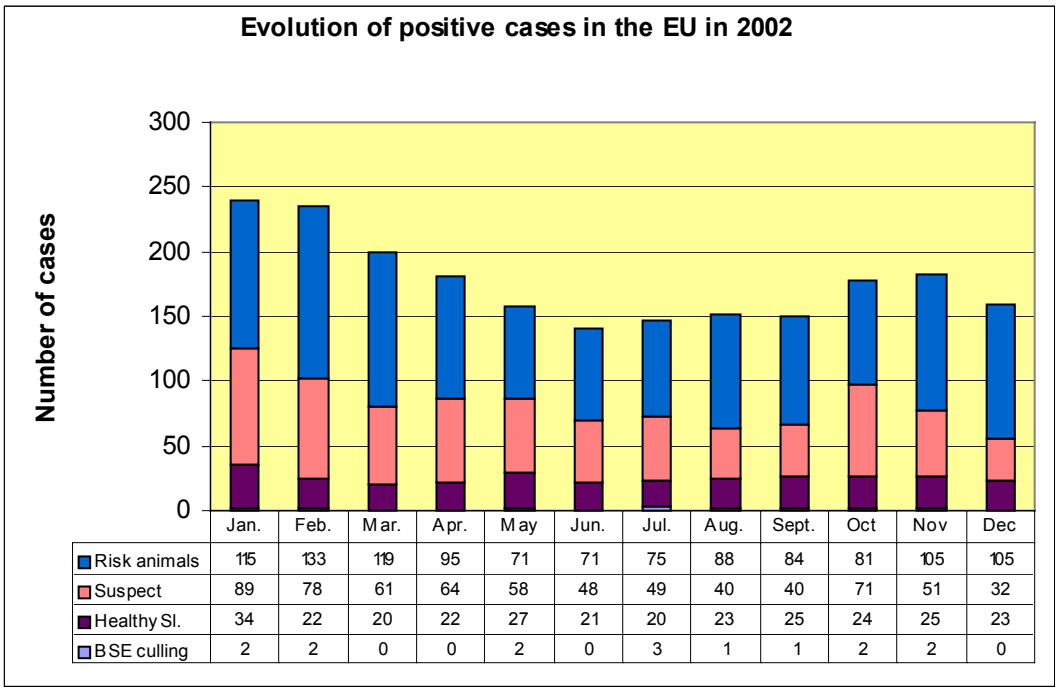


Table 9: Positives in active monitoring and passive surveillance

	Active monitoring			Passive surveillance			Percentage Passive/total	
	Tests			Tests				
	No.	Positive	Ratio[1]	No.	Positive	Ratio[1]	Tests	Positives
Belgique/België	450.140	33	0,73	279	5	179,2	0,062%	13,2%
Danmark	293.303	3	0,10	38	0	0,0	0,013%	0,0%
Deutschland	3.030.196	95	0,31	346	11	317,9	0,011%	10,4%
Ellas	23.735	0	0,00	0	0	0,0	0,000%	
España	545.989	117	2,14	67	17	2.537,3	0,012%	12,7%
France	3.183.790	199	0,63	207	41	1.980,7	0,007%	17,1%
Ireland	707.033	225	3,18	511	108	2.113,5	0,072%	32,6%
Italia	731.486	36	0,49	99	0	0,0	0,014%	0,0%
Luxembourg	18.384	1	0,54	14	0	0,0	0,076%	0,0%
Nederland	558.390	23	0,41	39	1	256,4	0,007%	4,2%
Österreich	228.639	0	0,00	4	0	0,0	0,002%	
Portugal	82.077	63	7,68	150	23	1.533,3	0,182%	26,7%
Suomi-Finland	137.002	0	0,00	6	0	0,0	0,004%	
Sverige	37.471	0	0,00	26	0	0,0	0,069%	
United Kingdom	393.589	650	16,49	872	475	5.447,2	0,221%	42,2%
Total	**10.421.224**	**1.445**	**1,39**	**2.658**	**681**	**2.562,1**	**0,025%**	**32,1%**

[1] Positives per 10.000 bovine animals tested.

Table 10: Comparison of positive cases in the second semester of 2002 with the second semester of 2001

	Number of positives			Ratio[1]		
	2002	2001	Δ	2002	2001	Δ
Belgique/België	20	31	-35%	0,91	1,39	-35%
Danmark	2	4	-50%	0,13	0,26	-52%
Deutschland	52	45	16%	0,36	0,28	28%
Ellas	0	1	-100%	0,00	0,96	-100%
España	72	36	100%	2,51	1,41	77%
France	102	174	-41%	0,64	1,13	-43%
Ireland	145	184	-21%	3,56	3,37	6%
Italia	19	35	-46%	0,51	1,15	-57%
Luxembourg	1	0	100%	1,09	0,00	100%
Nederland	13	10	30%	0,48	0,31	56%
Österreich	0	1	0%	0,00	0,08	-100%
Portugal	37	72	-49%	9,27	25,14	-63%
Suomi-Finland	0	1	-100%	0,00	0,58	-100%
Sverige	0	0	0%	0,00	0,00	0%
EU except UK	**463**	**594**	**-22%**	**0,92**	**1,15**	**-20%**
United Kingdom	507	804	-37%	23,23	88,62	-74%
EU 15	**970**	**1.398**	**-31%**	**1,84**	**2,66**	**-31%**

[1] positive cases per 10.000 bovine animals tested;

Comments on positive cases

The results of UK in Tables 6, 9 and 10 cannot be compared to other Member States because the monitoring programme was not the same. Furthermore, the results of Member States using a lower age limit should not be compared with results of Member States using the standard age limit.

Despite the increased number of samples, the number of positive cases dropped in 2002 compared to 2001 in all Member States except in Spain, Ireland, the Netherlands and Luxembourg (1 case), as illustrated in Table 8. Also, a reduction of the number of positive cases was observed during 2002 (Table 7, Figure 3). However, since the extended active monitoring only started in July 2001, the evolution over a one year period should be evaluated by comparing the number of positive cases and the ratio (positive cases per 10.000 tested cattle), calculated from July to December in 2001 and 2002. These figures can be found in Table 10 indicating that both the number of cases and the ratio dropped by 31%. The evolution of the prevalence (ratio) is favourable in all Member States except Spain, Germany, Ireland and the Netherlands.

In Spain, the increased number of positive cases and ratio may be explained by the relatively high number of cases detected last year in young animals born between 1996 and 1998 (see table 24). This age group of animals is now getting closer to the average age when the disease becomes clinical, which is 4-6 years, and consequently the number of reported cases increases.

The increase in Germany may be part of a normal variation since the number of cases and the prevalence over the whole year 2002 decreased compared to 2001.

In Ireland, the increase in prevalence is the consequence of the highly increased monitoring in risk animals, having a high TSE prevalence.

The total number of cases in the Netherlands is low and it is therefore difficult to assess whether the observed figures indicate a true increase or are just part of the normal variation.

4.3 TESTING BY TARGET GROUP

Table 11: Testing on emergency slaughtered bovine animals

	Emergency slaughter				
	No.	Positive	Ratio[1]		
			2002	2001	Δ
Belgique/België	1.445	0	0,00	0,00	-
Danmark	1.680	0	0,00	0,00	-
Deutschland	6.850	6	8,76	26,34	-67%
Ellas	249	0	0,00	0,00	-
España	1.661	2	12,04	14,91	-19%
France	0	0	-	-	-
Ireland	0	0	-	-	-
Italia	5.104	4	7,84	9,04	-13%
Luxembourg	48	0	0,00	0,00	-
Nederland	10.266	2	1,95	1,51	29%
Österreich	3.869	0	0,00	0,00	-
Portugal	1.109	1	9,02	68,12	-87%
Suomi-Finland	9.241	0	0,00	0,00	-
Sverige	1.788	0	0,00	0,00	-
United Kingdom	138.833	494	35,58	59,75	-40%
Total	**182.143**	**509**	**27,95**	**33,59**	**-17%**

[1] Positives per 10.000 bovine animals tested.

Table 12: Testing on bovine animals with clinical signs ad ante-mortem

	Clinical signs ad ante-mortem				
	No.	Positive	Ratio[1]		
			2002	2001	Δ
Belgique/België	98	0	0,00	72,99	-100%
Danmark	24	0	0,00	0,00	-
Deutschland	1.585	0	0,00	540,54	-100%
Ellas	17	0	0,00	0,00	-
España	1.266	9	71,09	153,85	-54%
France	0	0	-	-	-
Ireland	2.169	4	18,44	44,79	-59%
Italia	42.481	4	0,94	6,62	-86%
Luxembourg	3	1	3333,33	0,00	-
Nederland	7.444	2	2,69	5000,00	-100%
Österreich	0	0	-	-	-
Portugal	9.779	4	4,09	11,10	-63%
Suomi-Finland	5.843	0	0,00	1,68	-100%
Sverige	3	0	0,00	0,00	-
United Kingdom	789	3	38,02	1538,46	-98%
Total	**71.501**	**27**	**3,78**	**14,40**	**-74%**

[1] Positives per 10.000 bovine animals tested.

Table 13: Testing on fallen stock

	Fallen Stock				
	No.	Positive	Ratio[1]		
			2002	2001	Δ
Belgique/België	36.386	16	4,40	5,36	-18%
Danmark	34.291	2	0,58	0,99	-41%
Deutschland	251.177	44	1,75	2,05	-14%
Ellas	1.990	0	0,00	0,00	-
España	83.457	63	7,55	6,00	26%
France	271.727	124	4,56	7,48	-39%
Ireland	76.203	183	24,01	32,91	-27%
Italia	55.954	7	1,25	1,76	-29%
Luxembourg	1.890	0	0,00	0,00	-
Nederland	46.611	9	1,93	0,97	99%
Österreich	9.695	0	0,00	0,00	-
Portugal	3.305	19	57,49	111,88	-49%
Suomi-Finland	7.249	0	0,00	0,00	-
Sverige	23.607	0	0,00	0,00	-
United Kingdom	81.431	139	17,07	37,90	-55%
Total	**984.973**	**606**	**6,15**	**6,08**	**1%**

[1] Positives per 10.000 bovine animals tested

Table 14: Testing on all risk bovine animals (Fallen stock, bovine animals with clinical signs and emergency slaughter)

	Total risk animals				
	No.	Positive	Ratio[1]		
			2002	2001	Δ
Belgique/België	37.929	16	4,22	5,44	-22%
Danmark	35.995	2	0,56	0,90	-38%
Deutschland	259.612	50	1,93	2,82	-32%
Ellas	2.256	0	0,00	0,00	-
España	86.384	74	8,57	7,09	21%
France	271.727	124	4,56	7,47	-39%
Ireland	78.372	187	23,86	33,32	-28%
Italia	103.539	15	1,45	3,52	-58%
Luxembourg	1.941	1	5,15	0,00	-
Nederland	64.321	13	2,02	1,35	50%
Österreich	13.564	0	0,00	0,00	-
Portugal	14.193	24	16,91	36,10	-53%
Suomi-Finland	22.333	0	0,00	0,56	-100%
Sverige	25.398	0	0,00	0,00	-
United Kingdom	221.053	636	28,77	51,82	-44%
Total	**1.238.617**	**1.142**	**9,23**	**9,76**	**-5%**

[1] Positives per 10.000 bovine animals tested

Table 15: Testing on healthy slaughtered bovine animals

	Healthy Slaughter				
	No.	Positive	Ratio[1]		
			2002	2001	Δ
Belgique/België	408.934	17	0,42	0,78	-47%
Danmark	254.668	1	0,04	0,12	-67%
Deutschland	2.767.958	42	0,15	0,14	9%
Ellas	21.457	0	0,00	0,65	-100%
España	454.132	36	0,79	1,07	-26%
France	2.896.182	74	0,26	0,35	-27%
Ireland	610.002	34	0,56	0,53	5%
Italia	623.913	21	0,34	0,72	-53%
Luxembourg	16.443	0	0,00	0,00	-
Nederland	491.069	10	0,20	0,24	-15%
Österreich	215.075	0	0,00	0,05	-100%
Portugal	66.721	38	5,70	6,69	-15%
Suomi-Finland	114.669	0	0,00	0,00	-
Sverige	12.073	0	0,00	0,00	-
United Kingdom	171.591	14	0,82	0,48	70%
Total	**9.124.887**	**287**	**0,31**	**0,36**	**-13%**

[1] Positives per 10.000 bovine animals tested.

Table 16: Testing on culled bovine animals

	BSE eradication (culling)				
	No.	Positive	Ratio[1]		
			2002	2001	Δ
Belgique/België	3.277	0	0,00	2,84	-100%
Danmark	2.640	0	0,00	0,00	-
Deutschland	2.626	3	11,42	2,98	283%
Ellas	22	0	0,00	0,00	-
España	5.473	7	12,79	2,70	374%
France	15.881	3	1,89	2,70	-30%
Ireland	18.659	4	2,14	3,28	-35%
Italia	4.034	0	0,00	0,00	-
Luxembourg	0	0	-	-	-
Nederland	3.000	0	0,00	0,00	-
Österreich	0	0		0,00	-
Portugal	1.163	1	8,60	14,91	-42%
Suomi-Finland	0	0	-	-	-
Sverige	0	0	-	-	-
United Kingdom	945	0	0,00	0,00	-
Total	**57.720**	**18**	**3,12**	**2,83**	**10%**

[1] Positives per 10.000 bovine animals tested.

Table 17: Total of testing by active monitoring

	Total active monitoring				
	No.	Positive	Ratio[1]		
			2002	2001	Δ
Belgique/België	450.140	33	0,73	0,98	-25%
Danmark	293.303	3	0,10	0,18	-43%
Deutschland	3.030.196	95	0,31	0,37	-16%
Ellas	23.735	0	0,00	0,58	-100%
España	545.989	117	2,14	1,92	12%
France	3.183.790	201	0,63	0,74	-15%
Ireland	707.033	225	3,18	1,82	75%
Italia	731.486	36	0,49	1,12	-56%
Luxembourg	18.384	1	0,54	0,00	-
Nederland	558.390	23	0,41	0,34	21%
Österreich	228.639	0	0,00	0,05	-100%
Portugal	82.077	63	7,68	13,27	-42%
Suomi-Finland	137.002	0	0,00	0,36	-100%
Sverige	37.471	0	0,00	0,00	-
United Kingdom	393.589	650	16,51	40,38	-59%
Total	**10.421.224**	**1.447**	**1,39**	**1,24**	**12%**

[1] Positives per 10.000 bovine animals tested.

Comments on the testing per target group

Figures between different Member States should be compared with caution as:

- The policy on emergency slaughter varies between Member States. In certain countries cattle are hardly, or not, received for emergency slaughter.
- The policy on animals with clinical signs ad ante-mortem inspection also varies between Member States. In addition, the interpretation of this target group was different and the definition of this group was amended in August 2002.
- Different monitoring programmes were run in healthy slaughtered cattle, testing also younger cattle and resulting in a lower ratio. In addition, the testing in the UK focussed on animals born after the date of the effective feed ban.
- The results of different target groups are interdependent and should not be viewed in isolation. For example, an effective passive surveillance will increase the number of cases found in suspects and may at the same time decrease the ratio of positive cases in the other target groups, in particular in fallen stock and emergency slaughtered animals.

The comparison between the 2001 and 2002 overall ratio in active monitoring should be interpreted with caution as:

- The proportion of risk animals (having a higher ratio) increased in 2002 compared to 2001 (see Table 5).
- The sampling of risk animals increased in particular in UK and Ireland, where the ratio is higher than average (see Table 5).

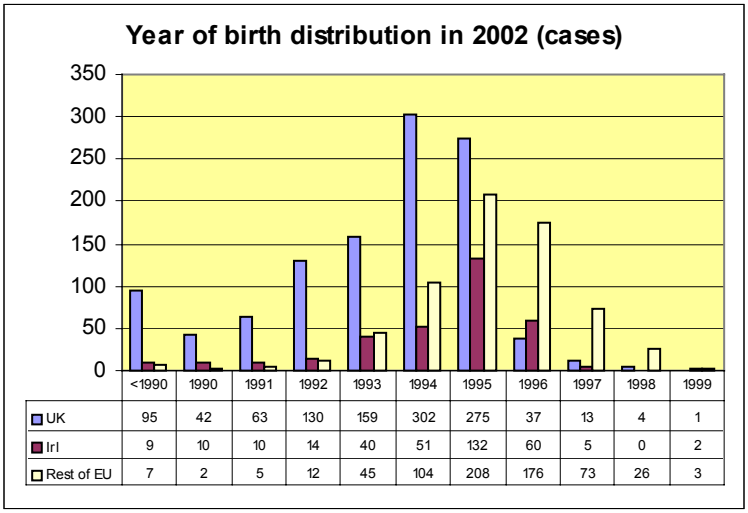
The figures illustrate that the likelihood of finding BSE cases is almost 30 times higher in fallen stock, emergency slaughtered cattle and cattle with general clinical signs at ante-mortem ("risk animals") than in healthy slaughtered cattle. In culled animals, the prevalence was almost 10 times higher than in healthy slaughtered cattle. However, the high prevalence in culled animals may be due to cases in particular subgroups such as birth cohorts.

4.4 YEAR OF BIRTH AND AGE DISTRIBUTION OF POSITIVE CASES

Table 18: Year of birth distribution of positive cases

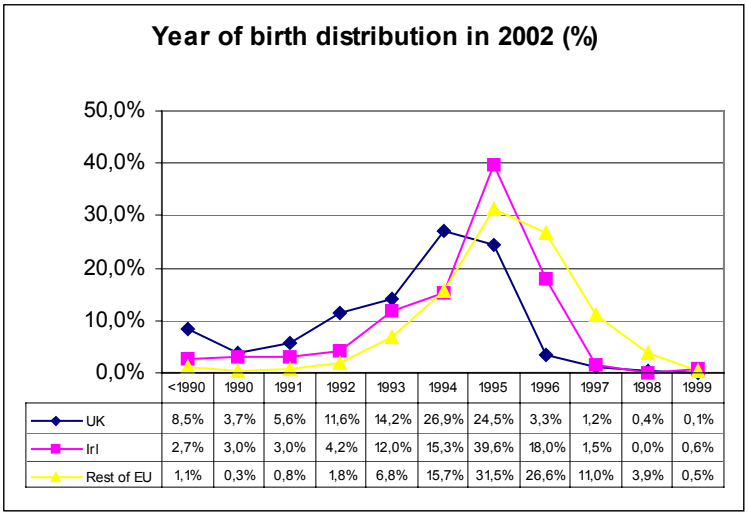
		Year of Birth											
Member State		**Before 1990**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**Total**
Belgique / België	**No. of cases**	0	0	0	3	1	5	8	13	8	0	0	**38**
	%	0,00%	0,00%	0,00%	7,89%	2,63%	13,16%	21,05%	34,21%	21,05%	0,00%	0,00%	**100,00%**
Danmark	**No. of cases**	0	0	0	0	0	0	0	2	0	1	0	**3**
	%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	66,67%	0,00%	33,33%	0,00%	**100,00%**
Deutschland	**No. of cases**	1	1	0	1	3	5	32	45	10	8	0	**106**
	%	0,94%	0,94%	0,00%	0,94%	2,83%	4,72%	30,19%	42,45%	9,43%	7,55%	0,00%	**100,00%**
España	**No. of cases**	3	0	0	1	12	9	33	33	28	7	1	**127**
	%	2,36%	0,00%	0,00%	0,79%	9,45%	7,09%	25,98%	25,98%	22,05%	5,51%	0,79%	**100,00%**
France	**No. of cases**	1	1	3	5	17	56	103	40	10	4	0	**240**
	%	0,42%	0,42%	1,25%	2,08%	7,08%	23,33%	42,92%	16,67%	4,17%	1,67%	0,00%	**100,00%**
Ireland	**No. of cases**	9	10	10	14	40	51	132	60	5	0	2	**333**
	%	2,69%	2,99%	2,99%	4,19%	11,98%	15,27%	39,82%	17,96%	1,50%	0,00%	0,60%	**100,00%**
Italia	**No. of cases**	0	0	1	0	0	5	10	14	4	2	0	**36**
	%	0,00%	0,00%	2,78%	0,00%	0,00%	13,89%	27,78%	38,89%	11,11%	5,56%	0,00%	**100,00%**
Luxembourg	**No. of cases**	0	0	0	0	0	0	0	1	0	0	0	**1**
	%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%		0,00%	0,00%	0,00%	**100,00%**
Nederland	**No. of cases**	0	0	0	1	1	2	3	10	4	3	0	**24**
	%	0,00%	0,00%	0,00%	4,17%	4,17%	8,33%	12,50%	41,67%	16,67%	12,50%	0,00%	**100,00%**
Portugal	**No. of cases**	2	0	1	1	11	22	19	19	8	1	2	**86**
	%	2,33%	0,00%	1,16%	1,16%	12,79%	25,58%	22,09%	22,09%	9,30%	1,16%	2,33%	**100,00%**
United Kingdom	**No. of cases**	95	42	63	130	159	302	275	37	13	4	1	**1121**
	%	8,48%	3,75%	5,63%	11,61%	14,11%	26,96%	24,55%	3,30%	1,16%	0,36%	0,09%	**100,00%**
Total	**No. of cases**	**111**	**54**	**78**	**156**	**244**	**457**	**616**	**273**	**91**	**30**	**6**	**2116**
	%	**5,25%**	**2,55%**	**3,69%**	**7,37%**	**11,53%**	**21,60%**	**29,11%**	**12,90%**	**4,30%**	**1,42%**	**0,28%**	**100,00%**

Figure 4: Year of birth distribution of positive cases in 2002: comparison of UK, Ireland and the rest of the EU:



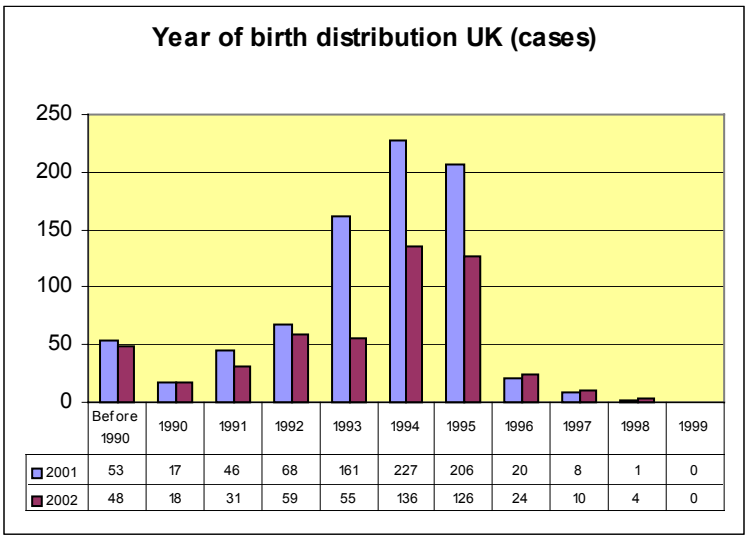
	<1990	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
UK	95	42	63	130	159	302	275	37	13	4	1
Irl	9	10	10	14	40	51	132	60	5	0	2
Rest of EU	7	2	5	12	45	104	208	176	73	26	3

Figure 5: Year of birth distribution in percentage of positive cases in 2002: comparison of UK, Ireland and the rest of the EU:



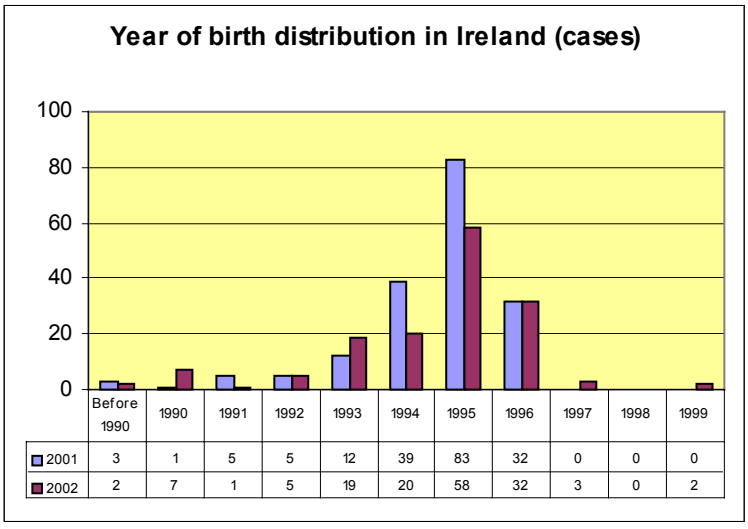
	<1990	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
UK	8,5%	3,7%	5,6%	11,6%	14,2%	26,9%	24,5%	3,3%	1,2%	0,4%	0,1%
Irl	2,7%	3,0%	3,0%	4,2%	12,0%	15,3%	39,6%	18,0%	1,5%	0,0%	0,6%
Rest of EU	1,1%	0,3%	0,8%	1,8%	6,8%	15,7%	31,5%	26,6%	11,0%	3,9%	0,5%

Figure 6: Year of birth distribution in the UK: comparison of positive cases detected during the second semester of either 2001 or 2002:



	Before 1990	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
2001	53	17	46	68	161	227	206	20	8	1	0
2002	48	18	31	59	55	136	126	24	10	4	0

Figure 7: Year of birth distribution in the Ireland: comparison positive cases detected during the second semester of either 2001 or 2002:



	Before 1990	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
2001	3	1	5	5	12	39	83	32	0	0	0
2002	2	7	1	5	19	20	58	32	3	0	2

Figure 8: Year of birth distribution in the rest of the EU: comparison of positive cases detected during the second semester of either 2001 or 2002:

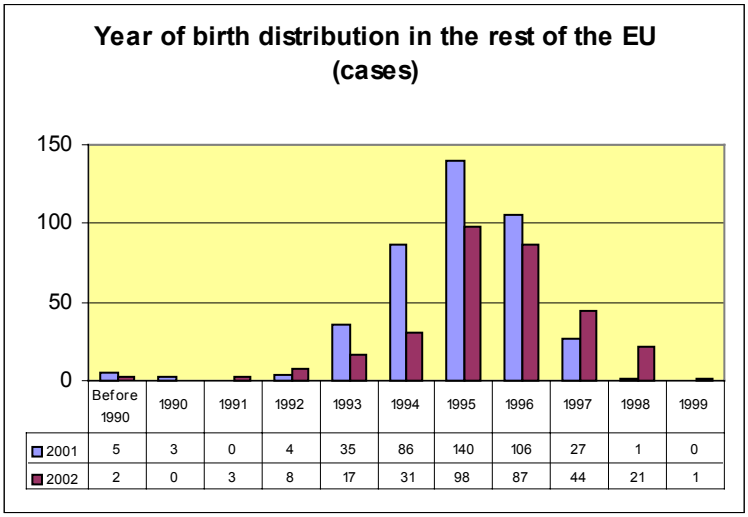


Table 19: Mean age in months per target group

	Clinical signs			Emergency slaughter			Fallen stock			Healthy Slaughter			Suspects		
	2002	**2001**	**Δ**	**2002**	**2001**	**Δ**	**2002**	**2001**	**Δ**	**2002**	**2001**	**Δ**	**2002**	**2001**	**Δ**
Belgique/België	0	63		0	0		84	75	**9**	75	72	**3**	81	74	**7**
Danmark	0	0		0	0		64	78	**-14**	71	58	**13**	0	48	
Deutschland	0	63		82	61	**20**	78	65	**13**	78	68	**10**	70	65	**6**
España	75	73	**2**	67	64	**2**	77	74	**3**	81	83	**-2**	86	64	**22**
France	0	0		0	0		86	79	**6**	87	76	**11**	84	75	**9**
Ireland	100	82	**18**	0	0		94	82	**12**	102	87	**15**	93	79	**14**
Italia	89	65	**24**	73	77	**-4**	70	75	**-4**	80	66	**14**	0	0	
Luxembourg	73	0													
Nederland	60	60		94	50	**44**	71	88	**-17**	79	76	**3**	75	78	**-3**
Portugal	88	78	**10**	0	77		85	88	**-3**	87	81	**6**	88	82	**6**
United Kingdom	100	95	**5**	103	93	**9**	104	105	**-1**	90	57	**33**	97	86	**11**
EU 15	85,1	71,1	**14,0**	108,0	95,0	**13,0**	93,8	85,2	**8,6**	86,0	76,2	**9,8**	97,1	86,5	**10,6**

Average:	**96,9**	**85,9**	**11,0**

Figure 9: Mean age of positive cases per target group in the UK: comparison of 2001 and 2002:

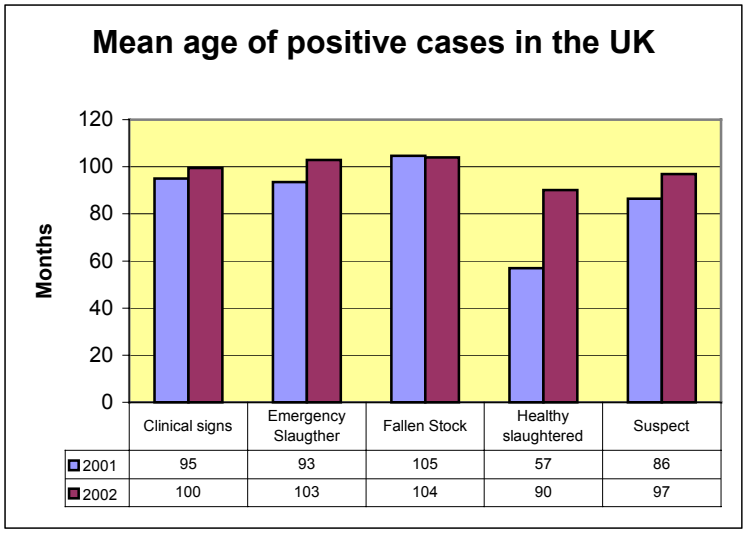


Figure 10: Mean age of positive cases per target group in Ireland: comparison of 2001 and 2002:

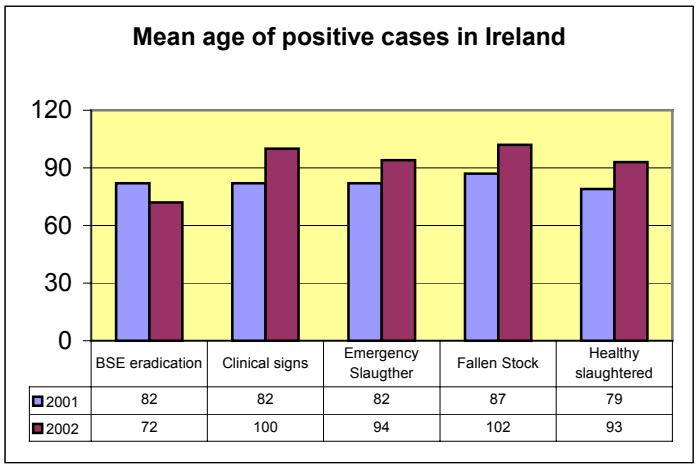


Figure 11: Mean age of positive cases per target group in the rest of the EU: comparison of 2001 and 2002:

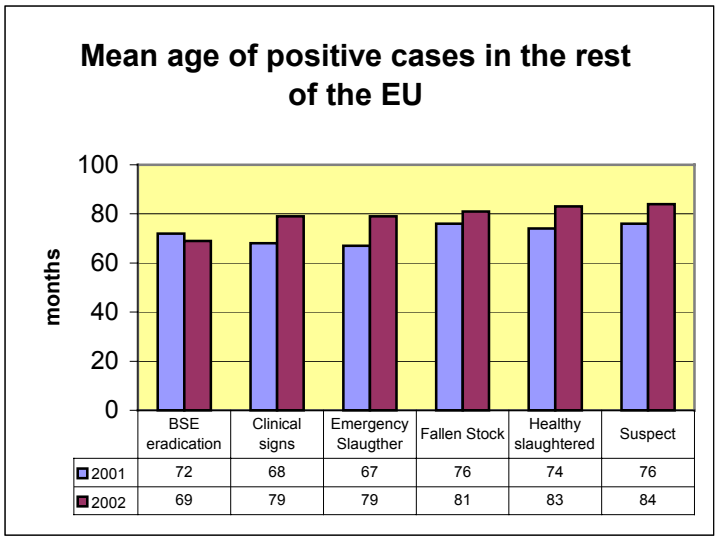
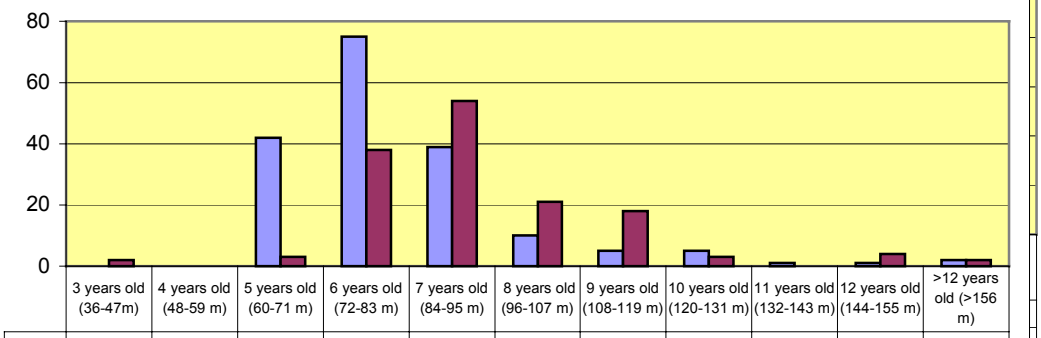


Table 20: Age distribution of all positive cases

		Age (years old)							
		2 (24-35m)	3 (36-47m)	4 (48-59m)	5 (60-71m)	6 (72-83m)	7 (84-95m)	=>8 (=>96m)	Total
Belgique / België	No. of cases	0	0	2	13	10	9	4	**38**
	%	0,00%	0,00%	5,26%	34,21%	26,32%	23,68%	10,53%	**100,00%**
Danmark	No. of cases	0	1	0	1	1	0	0	**3**
	%	0,00%	33,33%	0,00%	33,33%	33,33%	0,00%	0,00%	**100,00%**
Deutschland	No. of cases	0	0	13	22	48	15	8	**106**
	%	0,00%	0,00%	12,26%	20,75%	45,28%	14,15%	7,55%	**100,00%**
España	No. of cases	0	1	17	30	35	23	21	**127**
	%	0,00%	0,79%	13,39%	23,62%	27,56%	18,11%	16,54%	**100,00%**
France	No. of cases	0	0	7	27	81	83	42	**240**
	%	0,00%	0,00%	2,92%	11,25%	33,75%	34,58%	17,50%	**100,00%**
Ireland	No. of cases	0	2	1	13	98	109	110	**333**
	%	0,00%	0,60%	0,30%	3,90%	29,43%	32,73%	33,03%	**100,00%**
Italia	No. of cases	0	0	3	8	15	7	3	**36**
	%	0,00%	0,00%	8,33%	22,22%	41,67%	19,44%	8,33%	**100,00%**
Luxembourg	No. of cases	0	0	0	0	1	0	0	**1**
	%	0,00%	0,00%	0,00%	0,00%	100,00%	0,00%	0,00%	**100,00%**
Nederland	No. of cases	0	0	3	9	6	3	3	**24**
	%	0,00%	0,00%	12,50%	37,50%	25,00%	12,50%	12,50%	**100,00%**
Portugal	No. of cases	1	1	5	13	17	24	25	**86**
	%	1,16%	1,16%	5,81%	15,12%	19,77%	27,91%	29,07%	**100,00%**
United Kingdom	No. of cases	1	0	8	16	138	324	634	**1121**
	%	0,09%	0,00%	0,71%	1,43%	12,31%	28,90%	56,56%	**100,00%**

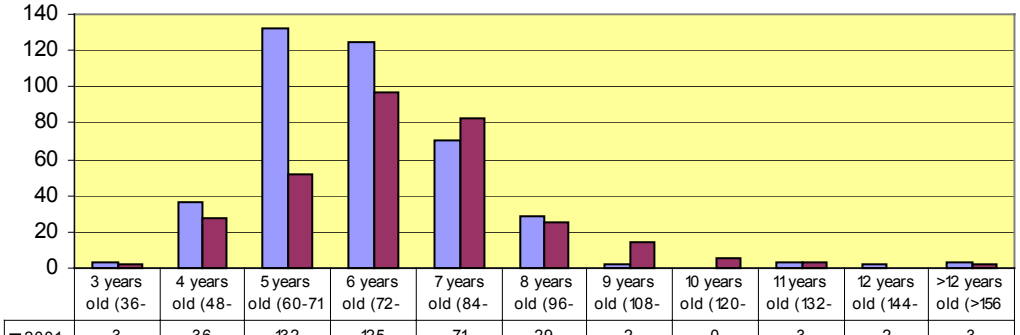
Figures 12, 13 and 14: Comparison of the age distribution of positive cases detected during the second semester of 2001 and 2002: UK, Ireland and the rest of the EU

Fig. 13: Age distribution of positive cases in Ireland (2° semester)



	3 years old (36-47m)	4 years old (48-59 m)	5 years old (60-71 m)	6 years old (72-83 m)	7 years old (84-95 m)	8 years old (96-107 m)	9 years old (108-119 m)	10 years old (120-131 m)	11 years old (132-143 m)	12 years old (144-155 m)	>12 years old (>156 m)
2001	0	0	42	75	39	10	5	5	1	1	2
2002	2	0	3	38	54	21	18	3	0	4	2

Fig. 14: Age distribution of positive cases in the rest of the EU (2° semester)



	3 years old (36-	4 years old (48-	5 years old (60-71	6 years old (72-	7 years old (84-	8 years old (96-	9 years old (108-	10 years old (120-	11 years old (132-	12 years old (144-	>12 years old (>156
2001	3	36	132	125	71	29	2	0	3	2	3
2002	2	28	52	97	83	25	14	6	3	0	2

Table 21: Age distribution of positive cases in risk animals (Fallen stock, emergency slaughter and clinical signs at ante-mortem inspection):

		Age (years old)							
		2 (24-35m)	3 (36-47m)	4 (48-59m)	5 (60-71m)	6 (72-83m)	7 (84-95m)	=>8 (>=96m)	Total
Belgique / België	No. of cases	0	0	2	4	3	3	4	16
	%	0,0%	0,0%	12,5%	25,0%	18,8%	18,8%	25,0%	100,0%
Danmark	No. of cases	0	1	0	0	1	0	0	2
	%	0,0%	50,0%	0,0%	0,0%	50,0%	0,0%	0,0%	100,0%
Deutschland	No. of cases	0	0	6	8	22	9	5	50
	%	0,0%	0,0%	12,0%	16,0%	44,0%	18,0%	10,0%	100,0%
España	No. of cases	0	1	13	17	23	11	9	74
	%	0,0%	1,4%	17,6%	23,0%	31,1%	14,9%	12,2%	100,0%
France	No. of cases	0	0	4	13	45	38	24	124
	%	0,0%	0,0%	3,2%	10,5%	36,3%	30,6%	19,4%	100,0%
Ireland	No. of cases	0	0	0	9	49	61	68	187
	%	0,0%	0,0%	0,0%	4,8%	26,2%	32,6%	36,4,5%	100,0%
Italia	No. of cases	0	0	2	4	5	3	1	15
	%	0,0%	0,0%	13,3%	26,7%	33,3%	20,0%	6,7%	100,0%
Luxembourg	No. of cases	0	0	0	0	1	0	0	1
	%	0,0%	0,0%	0,0%	0,0%	100,0%	0,0%	0,0%	100,0%
Nederland	No. of cases	0	0	3	4	2	3	1	13
	%	0,0%	0,0%	23,1%	30,8%	15,4%	23,1%	7,7%	100,0%
Portugal	No. of cases	0	0	1	4	6	7	6	24
	%	0,00%	0,00%	4,17%	16,67%	25,00%	29,17%	25,00%	100,00%
United Kingdom	No. of cases	1	0	6	9	65	152	396	629
	%	0,2%	0,0%	1,0%	1,4%	10,3%	24,2%	63,0%	100,0%
EU except UK and IRL	No. of cases	0	2	31	54	108	74	50	319
	%	0,0%	0,6%	9,7%	16,9%	33,9%	23,2%	15,7%	100,0%

Figure 15: Age distribution in risk animals in 2002:

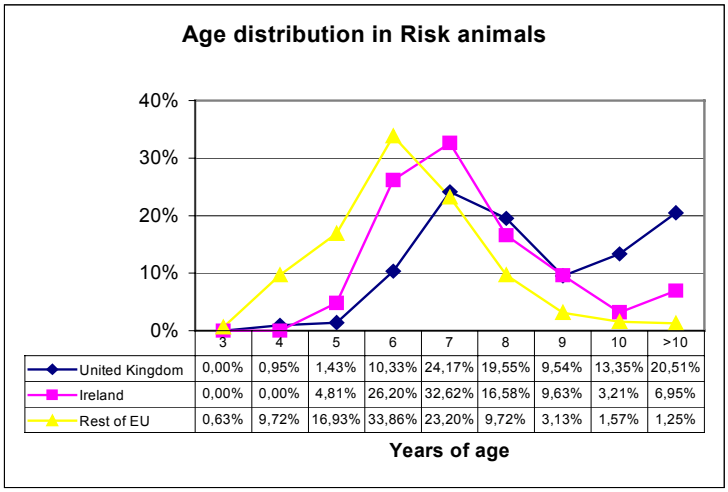


Table 22: Age distribution of positive cases in healthy slaughtered cattle

		Age (years old)							
		2	3	4	5	6	7	>8	
		25-35m	36-47m	48-59m	60-71m	72-83m	84-95m	=> 96m	Total
Belgique / België	No. of cases	0	0	0	8	5	4	0	17
	%	0,0%	0,0%	0,0%	47,1%	29,4%	23,5%	0,0%	100,0%
Danmark	No. of cases	0	0	0	1	0	0	0	1
	%	0,0%	0,0%	0,0%	100,0%	0,0%	0,0%	0,0%	100,0%
Deutschland	No. of cases	0	0	4	8	22	5	3	42
	%	0,0%	0,0%	9,5%	19,0%	52,4%	11,9%	7,1%	100%
España	No. of cases	0	0	2	9	10	8	7	36
	%	0,0%	0,0%	5,6%	25,0%	27,8%	22,2%	19,4%	100,0%
France	No. of cases	0	0	2	9	22	25	16	74
	%	0,0%	0,0%	2,7%	12,2%	29,7%	33,8%	21,6%	100,0%
Ireland	No. of cases	0	0	0	0	10	11	13	34
	%	0,0%	0,0%	0,0%	0,0%	29,4%	32,4%	38,2%	100,0%
Italia	No. of cases	0	0	1	4	10	4	2	21
	%	0,0%	0,0%	4,8%	19,0%	47,6%	19,0%	9,5%	100,0%
Nederland	No. of cases	0	0	0	5	3	0	2	10
	%	0,0%	0,0%	0,0%	50,0%	30,0%	0,0%	20,0%	100,0%
Portugal	No. of cases	1	1	2	8	7	8	11	38
	%	2,6%	2,6%	5,3%	21,1%	18,4%	21,1%	28,9%	100,0%
United Kingdom	No. of cases	0	0	1	3	7	0	8	19
	%	0,0%	0,0%	5,3%	15,8%	36,8%	0,0%	42,1%	100,0%
EU except UK and IRL	No. of cases	1	1	11	52	79	54	41	239
	%	0,4%	0,4%	4,6%	21,8%	33,1%	22,6%	17,2%	100,0%

Figure 16: Age distribution in healthy slaughtered cattle in 2002:

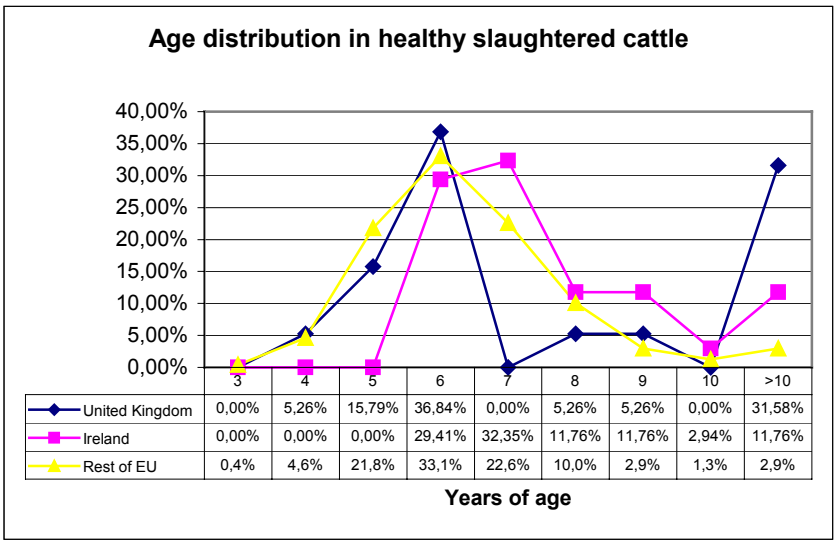
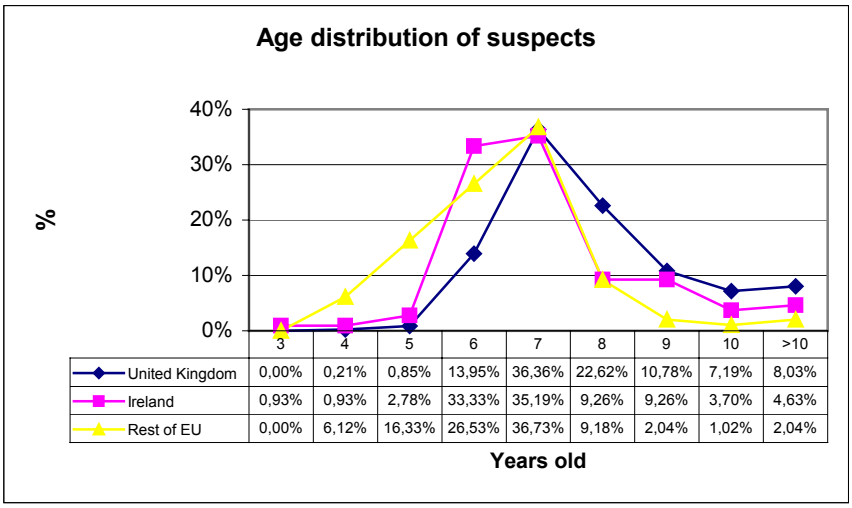


Table 23: Age distribution of positive cases in BSE suspects:

		Age (years old)							
		3 (36-47m)	4 (48-59m)	5 (60-71m)	6 (72-83m)	7 (84-95m)	8 (96-107m)	=>9 (>108 m)	Total
Belgique / België	No. of cases	0	0	1	2	2	0	0	5
	%	0,00%	0,00%	20,00%	40,00%	40,00%	0,00%	0,00%	100,0%
Deutschland	No. of cases	0	1	5	4	1	0	0	11
	%	0,00%	9,09%	45,45%	36,36%	9,09%	0,00%	0,00%	100,0%
España	No. of cases	0	2	4	2	4	3	2	17
	%	0,00%	11,76%	23,53%	11,76%	23,53%	17,65%	11,76%	100,0%
France	No. of cases	0	1	5	13	20	1	1	41
	%	0,00%	2,44%	12,20%	31,71%	48,78%	2,44%	2,44%	100,0%
Ireland	No. of cases	1	1	3	36	38	10	19	108
	%	0,93%	0,93%	2,78%	33,33%	35,19%	9,26%	17,59%	100,0%
Nederland	No. of cases	0	0	0	1	0	0	0	1
	%	0,00%	0,00%	0,00%	100,00%	0,00%	0,00%	0,00%	100,0%
Portugal	No. of cases	0	2	1	4	9	5	2	23
	%	0,00%	8,70%	4,35%	17,39%	39,13%	21,74%	8,70%	100,0%
United Kingdom	No. of cases	0	1	4	66	172	107	123	473
	%	0,00%	0,21	0,85%	13,95%	36,36%	22,62%	26,00%	100,0%
UE except UK and IRL	No. of cases	0	6	16	26	36	9	5	98
	%	0,00%	6,12%	16,33%	26,53%	36,73%	9,18%	5,10%	100,0%

Figure 17: Age distribution in suspects in 2002:



Comments on the year of birth and age distribution of positive cases

Tables 18, 19 and 20, and Figures 4, 5, 15, 16 and 17 illustrate that there are differences between Member States in the age profile of positive cases. Positive cases were older in the UK and to a lower extent in Ireland than in the rest of the EU. These differences may be explained by differences in the period of exposure to the agent and by the effectiveness of measures to prevent transmission of the agent, in particular the feed ban. The year of birth distribution in the second semester of 2002 compared to 2001 was similar in the UK (Figure 6) and Ireland (Figure 7), resulting in an increasing age of positive cases (figures 9, 10, 12 and 13). In the rest of the EU, a limited shift to more recent years of birth was still observed in the second semester of 2002 compared to 2001 (Figure 8), but the age of positive cases also increased in these Member States (figures 11 and 14). Taking into consideration an average incubation period of 5 years, these figures are an indication that measures taken from 1997 onwards may have had some effect and that the prevalence of BSE in young animals is decreasing.

When assessing the figures in healthy slaughtered animals in the UK, it should be borne in mind that the testing was targeted at animals born after 1 August 1996.

4.5 BSE IN YOUNG CATTLE

Table 24: BSE cases prevalence in young cattle, detected in 2001 or 2002

	Cattle population > 2 years old (x	Number of cases in cattle born in:				Prevalence (cases per 1 Mio cattle > 2 years old)of cattle born in:			
		1996	1997	1998	1999*	1996	1997	1998	1999*
België/Belgium	1457	32	8	0	0	21,96	5,49	0,00	0,00
Danmark	857	5	1	2	1	5,83	1,17	2,33	1,17
Deutschland	6228	111	16	10	0	17,82	2,57	1,61	0,00
España	3409	53	39	7	1	15,55	11,44	2,05	0,29
Ellas	331	1	0	0	0	3,02	0,00	0,00	0,00
France	10967	61	14	4	0	5,56	1,28	0,36	0,00
Ireland	3301	99	5	0	2	29,99	1,51	0,00	0,61
Italia	3368	34	11	2	0	10,10	3,27	0,59	0,00
Luxembourg	100	1	0	0	0	10,00	0,00	0,00	0,00
Nederland	1779	19	5	3	0	10,68	2,81	1,69	0,00
Österreich	976	1	0	0	0	1,02	0,00	0,00	0,00
Portugal	773	41	13	1	1	53,04	16,82	1,29	1,29
United Kingdom	4942	61	22	5	1	12,34	4,45	1,01	0,20
Total 2001	**39243**	**246**	**43**	**4**	**0**	**6,27**	**1,10**	**0,10**	**0,00**
Total 2002	**38488**	**273**	**91**	**30**	**6**	**6,96**	**2,32**	**0,76**	**0,15**

***: One case was detected in Portugal but probably infected in Denmark and therefore considered as a Danish case.**

Figure 18, 19, 20, and 21: Prevalence (cases/1 Mio cattle pop. > 2 years old) detected in 2001 or 2002 and born either in 1996, 1997, 1998 or 1999:

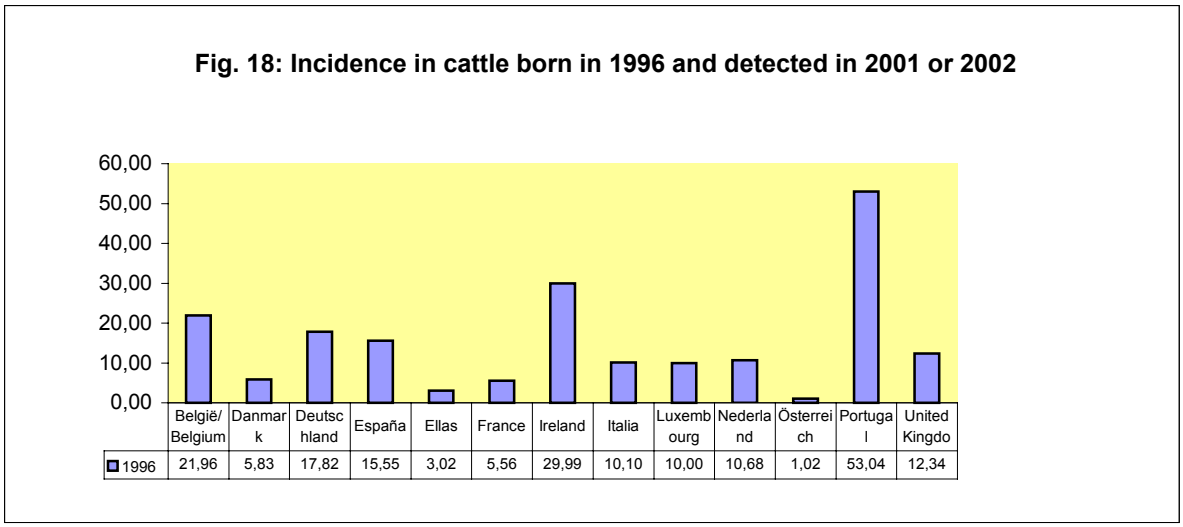
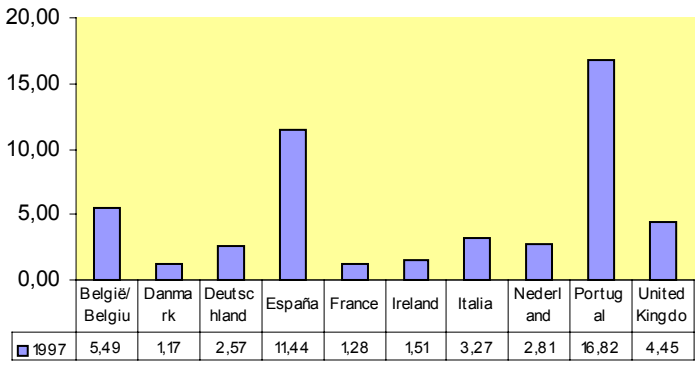
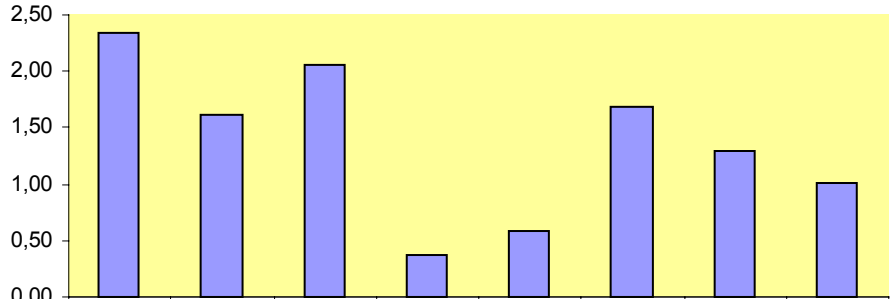


Fig. 19: Incidence in cattle born in 1997 and detected in 2001 or 2002



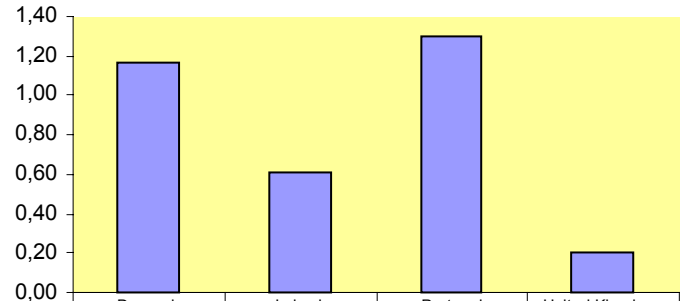
	België/ Belgiu	Danmark	Deutschland	España	France	Ireland	Italia	Nederland	Portugal	United Kingdo
1997	5,49	1,17	2,57	11,44	1,28	1,51	3,27	2,81	16,82	4,45

Fig. 20: Incidence in cattle born in 1998 and detected in 2001 or 2002



	Danmark	Deutschland	España	France	Italia	Nederland	Portugal	United Kingdom
1998	2,33	1,61	2,05	0,36	0,59	1,69	1,29	1,01

Fig. 21: Incidence in cattle born in 1999 and detected in 2001 or 2002



	Danmark	Ireland	Portugal	United Kingdom
1999*	1,17	0,61	1,29	0,20

Figure 22: Positive cases born after 31/12/1995: comparison of 2001 and 2002:

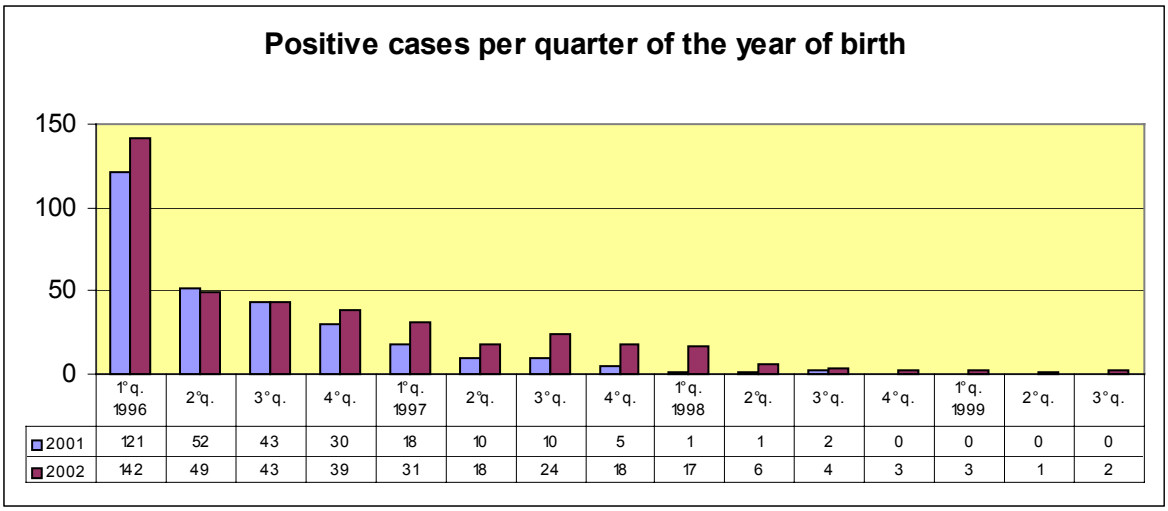
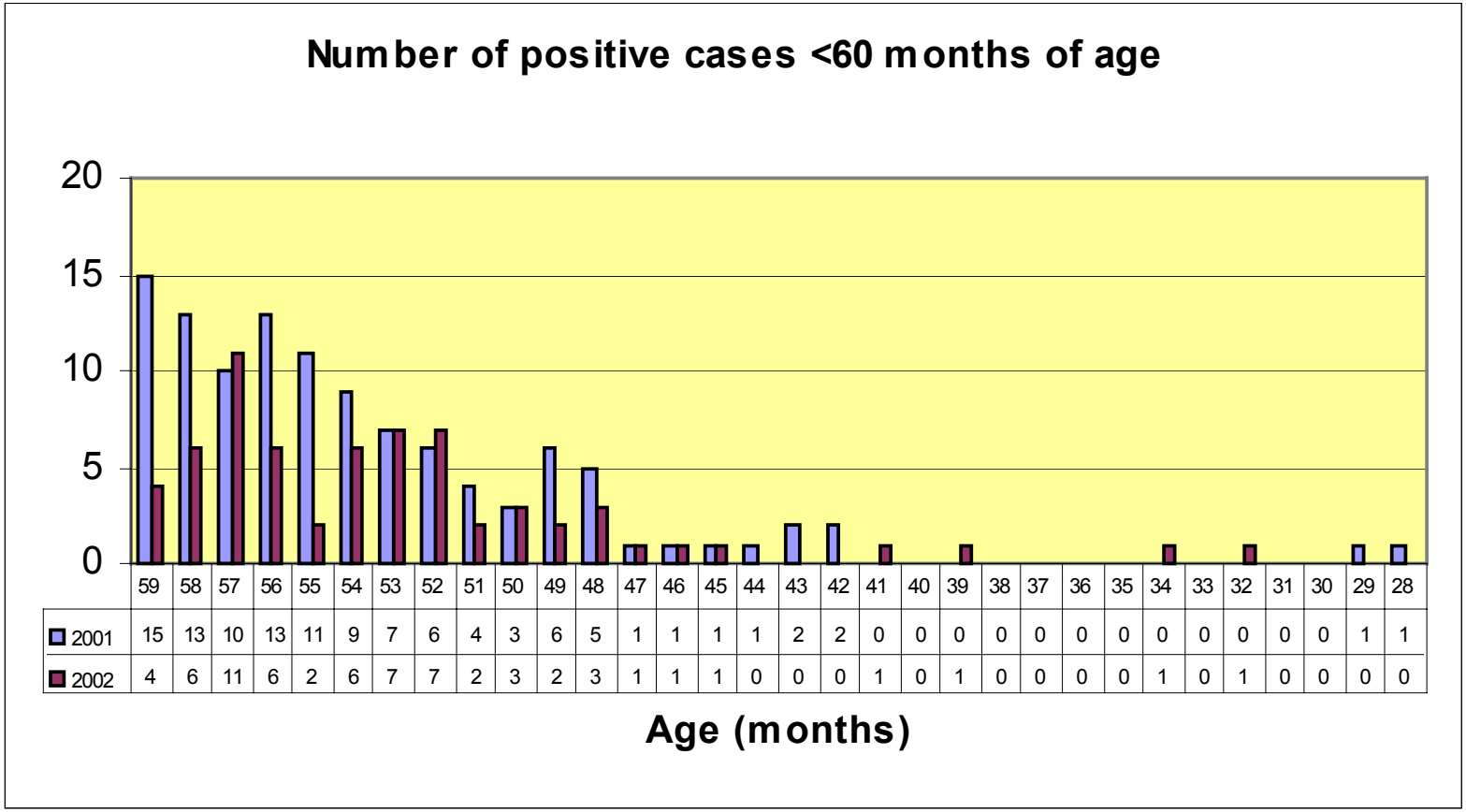


Table 25: Details on positive cases < 48 months detected in 2002

Age (months)	Member State	Target group	Date of birth
32	United Kingdom	Emergency slaughter	25/05/1999
34	Portugal	Healthy slaughter	10/08/1999
39	Danmark	Healthy slaughter	15/03/1999
41	Spain	Fallen Stock	5/07/1999
45	Ireland	Cohort	22/02/1999
46	Ireland	Suspect	12/02/1999
47	Danmark	Fallen Stock	8/12/1998

In 2001, 10 cases below 48 months were detected, the youngest case being 28 months.

Figure 23: Number of positive cases below 60 months of age



	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28
2001	15	13	10	13	11	9	7	6	4	3	6	5	1	1	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1
2002	4	6	11	6	2	6	7	7	2	3	2	3	1	1	1	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0

Comments on BSE in young cases

Comparisons in this section should be interpreted with caution since the number of cases born after 1996 is rather low. However, the prevalences in Table 24 and Figures 18, 19, 20 and 21 may be an indication of the effectiveness of measures to prevent BSE infection in cattle in different Member States in the period 1996 to 1999. Although the total prevalence in the UK is slightly underestimated due to the differences in the monitoring programme, the prevalence in the UK in young cattle seems to be similar to several other MS.

Figure 23 and Table 25 illustrate the reduction of BSE cases in young cattle detected in 2002 as compared to 2001.

When comparing 2002 figures to 2001 figures it should be borne in mind that the monitoring programme in the first half of 2001 was less intensive.

4.6 AGE DISTRIBUTION OF TESTED CATTLE

Table 26: Extrapolated age distribution of all tested cattle

All cattle																
	BE	**FR**	**DE**	**DK**	**EL**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**AU**	**PT**	**SV**	**FIN**	**UK**	**EU**
< 24 m	1.527	99	774.723	2.569	210	2.792	6.595	6.642	1	480	1.306	114	1.581	164	35	**798.838**
24-30 m	4.279	213.567	371.780	10.098	489	52.789	45.338	89.224	20	3.320	1	1.673	2.736	1.862	12.962	**810.140**
31-36 m	38.453	431.261	863.819	34.266	1.361	28.421	215.027	59.087	3.304	48.395	1	5.927	3.620	4.235	19.752	**1.756.929**
37-42 m	48.528	400.768	124.958	33.621	1.558	22.912	79.504	51.326	2.356	54.227	0	4.912	3.472	4.431	23.055	**855.628**
43-48 m	52.049	260.166	112.206	35.249	1.641	28.521	47.130	53.416	1.677	51.573	0	4.358	3.419	4.718	28.159	**684.282**
49-54 m	49.464	220.622	109.500	33.626	1.759	24.080	45.906	53.853	1.473	50.963	0	4.811	3.575	4.623	29.878	**634.134**
55-60 m	43.773	179.727	97.166	30.645	1.720	28.826	30.722	52.632	1.197	44.523	0	5.036	3.394	4.493	32.466	**556.319**
61-66 m	37.237	177.441	90.652	24.935	1.762	21.023	16.845	48.331	1.122	41.835	0	4.654	3.266	4.016	39.922	**513.040**
67-72 m	32.497	153.845	77.476	21.939	1.728	26.371	24.968	44.622	939	37.458	1	4.653	2.659	3.472	30.182	**462.811**
73-78 m	28.301	153.373	71.318	17.779	1.672	19.426	21.441	40.826	838	36.047	1	4.256	2.189	2.575	17.910	**417.952**
79-84 m	24.634	130.712	59.979	14.272	1.494	24.401	24.506	35.495	809	30.479	0	4.334	1.771	2.185	9.676	**364.747**
85-90 m	20.374	124.602	53.009	10.905	1.398	17.087	6.853	31.171	658	26.533	0	3.692	1.415	1.657	11.553	**310.907**
91-96 m	15.987	103.555	43.427	8.495	1.168	21.065	16.639	26.923	584	20.215	0	3.529	1.054	1.339	9.955	**273.936**
> 96 m	53.317	680.143	180.529	23.332	5.775	128.161	127.047	153.353	3.395	64.822	0	30.275	3.344	3.518	67.615	**1.524.626**
< 30 m	0	0	0	0	0	0	0	0	0	0	2.351	0	0	0	3.057	**5.408**
> 24 m	0	0	0	0	0	0	0	0	0	0	13.564	0	0	0	0	**13.564**
> 30 m	0	0	0	0	0	0	0	0	0	0	212.724	0	0	0	0	**212.724**
Total	**450.419**	**3.229.881**	**3.030.542**	**301.731**	**23.735**	**445.875**	**708.522**	**746.901**	**18.373**	**510.870**	**229.949**	**82.224**	**37.497**	**43.288**	**336.178**	**10.195.985**

Table 27: Extrapolated age distribution of tested suspects

Passive surveillance (suspects)															
	BE	**FR**	**DE**	**DK**	**EL**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**AU**	**PT**	**SV**	**FIN**	**UK**	**EU**
< 24 m	24	2	43	3	0	1	6	3	1	na	0	2	0	0	14	**99**
24-30 m	26	4	38	4	0	2	3	2	1	na	1	1	0	0	15	**97**
31-36 m	35	8	102	4	0	2	14	5	0	na	1	1	0	0	19	**192**
37-42 m	25	10	16	8	0	1	19	10	2	na	0	7	0	0	24	**122**
43-48 m	21	4	25	3	0	3	22	12	0	na	0	2	0	1	31	**124**
49-54 m	21	18	13	3	0	2	16	6	1	na	0	7	0	1	28	**115**
55-60 m	22	12	16	2	0	6	21	12	1	na	0	7	0	0	21	**120**
61-66 m	19	4	17	3	0	5	24	6	2	na	0	24	0	0	33	**137**
67-72 m	13	20	14	1	0	5	22	10	0	na	1	14	0	0	28	**128**
73-78 m	14	28	10	3	0	3	39	7	2	na	1	15	0	0	61	**184**
79-84 m	10	24	14	2	0	4	49	5	0	na	0	12	0	0	92	**211**
85-90 m	12	39	13	0	0	5	40	2	0	na	0	12	0	0	105	**228**
91-96 m	12	22	5	1	0	1	24	5	1	na	0	11	0	0	104	**187**
> 96 m	25	26	22	1	0	20	189	14	3	na	0	34	0	0	285	**620**
Total	**279**	**221**	**346**	**38**	**0**	**61**	**489**	**99**	**14**	**na**	**4**	**150**	**0**	**2**	**860**	**2.563**

na: not available

Table 28: Extrapolated age distribution of tested risk animals

Risk animals (fallen stock + emergency slaughter + clinical signs ad ante-mortem)																
	BE	**FR**	**DE**	**DK**	**EL**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**AU**	**PT**	**SV**	**FIN**	**UK**	**EU**
< 24 m	1.240	0	7.753	1.311	64	298	898	858	0	na	1.306	82	1.507	90	17	**15.425**
24-30 m	3.352	20.502	31.016	4.296	174	6.813	9.403	9.350	19	na	0	536	2.633	1.204	11.959	**101.258**
31-36 m	4.367	26.234	76.380	3.854	141	4.503	4.860	8.673	199	na	0	1.006	2.302	528	12.765	**145.813**
37-42 m	4.362	28.064	15.220	3.778	156	4.806	6.780	8.074	234	na	0	1.039	2.267	656	12.639	**88.076**
43-48 m	3.435	19.728	13.951	3.473	154	4.393	5.029	8.286	168	na	0	867	2.073	568	11.160	**73.286**
49-54 m	3.196	19.780	15.797	3.438	121	4.402	2.704	8.077	149	na	0	873	2.177	753	11.015	**72.482**
55-60 m	2.575	16.081	13.781	3.105	182	4.324	3.058	8.171	121	na	0	900	2.161	664	10.353	**65.476**
61-66 m	2.485	16.732	14.469	2.842	138	4.028	4.384	7.441	132	na	0	861	2.132	702	10.502	**66.848**
67-72 m	2.014	14.312	11.364	2.345	136	3.768	5.038	7.057	107	na	0	780	1.689	538	9.791	**58.940**
73-78 m	2.010	14.652	11.388	2.061	140	3.807	3.375	6.275	89	na	0	818	1.452	432	10.097	**56.595**
79-84 m	1.696	12.121	8.746	1.673	149	3.163	5.386	5.615	75	na	0	873	1.161	333	8.718	**49.708**
85-90 m	1.569	11.672	8.298	1.337	154	3.240	4.398	4.659	82	na	0	661	963	267	10.443	**47.744**
91-96 m	1.127	9.390	5.869	986	124	2.515	2.690	3.999	53	na	0	652	708	193	8.915	**37.220**
> 96 m	4.500	67.108	25.579	2.805	423	19.015	21.365	18.635	512	na	0	4.241	2.198	521	60.762	**227.665**
> 24 m	0	0	0	0	0	0	0	0	0	na	13.564	0	0	0	0	**13.564**
Total	**37.929**	**276.376**	**259.612**	**37.304**	**2.256**	**69.074**	**79.369**	**105.170**	**1.940**	**na**	**14.870**	**14.190**	**25.424**	**7.449**	**189.137**	**1.120.100**

na: not available

Table 29: Extrapolated age distribution of tested healthy slaughtered animals

Healthy slaughtered cattle																
	BE	**FR**	**DE**	**DK**	**EL**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**AU**	**PT**	**SV**	**FIN**	**UK**	**EU**
< 24 m	221	0	766.388	1.253	121	1.546	5.614	5.040	0	na	0	0	70	74	6	**780.333**
24-30 m	518	191.280	340.648	5.726	315	45.582	35.552	79.480	0	na	0	1.217	97	658	892	**701.965**
31-36 m	33.620	403.049	786.971	30.335	1.220	23.609	205.829	50.089	3.105	na	0	4.896	1.319	3.707	6.938	**1.554.688**
37-42 m	43.831	371.137	109.618	29.794	1.403	17.806	71.105	42.930	2.120	na	0	3.925	1.206	3.775	10.402	**709.051**
43-48 m	48.192	238.770	98.059	31.725	1.487	23.818	41.166	44.861	1.509	na	0	3.522	1.348	4.149	17.068	**555.674**
49-54 m	45.970	199.649	93.219	30.109	1.638	19.367	41.166	45.453	1.323	na	0	3.937	1.401	3.869	18.962	**506.062**
55-60 m	40.820	162.324	83.231	27.136	1.538	24.144	26.197	44.132	1.075	na	0	4.114	1.233	3.829	22.261	**442.034**
61-66 m	34.510	159.710	75.884	21.395	1.623	16.720	11.227	40.635	988	na	0	3.734	1.135	3.314	29.641	**400.516**
67-72 m	30.246	138.470	65.970	18.945	1.592	22.240	18.711	37.309	832	na	0	3.765	971	2.934	20.520	**362.507**
73-78 m	26.121	137.910	59.707	15.183	1.533	15.408	16.841	34.350	747	na	0	3.327	738	2.143	7.758	**321.766**
79-84 m	22.796	117.761	51.131	12.283	1.345	20.977	18.711	29.716	734	na	0	3.329	610	1.852	808	**282.054**
85-90 m	18.707	112.320	44.628	9.485	1.243	13.670	1.872	26.368	576	na	0	2.919	452	1.390	933	**234.562**
91-96 m	14.778	93.604	37.538	7.490	1.044	18.365	13.098	22.823	530	na	0	2.796	346	1.146	875	**214.434**
> 96 m	48.604	611.419	154.966	20.464	5.353	108.613	102.914	134.410	2.880	na	0	25.239	1.146	2.997	6.112	**1.225.118**
< 30 m	0	0	0	0	0	0	0	0	0	na	2.351	0	0	0	0	**2.351**
> 30 m	0	0	0	0	0	0	0	0	0	na	212.724	0	0	0	0	**212.724**
Total	**408.934**	**2.937.403**	**2.767.958**	**261.323**	**21.457**	**371.865**	**610.002**	**637.596**	**16.419**	**na**	**215.075**	**66.721**	**12.073**	**35.837**	**143.176**	**8.505.839**

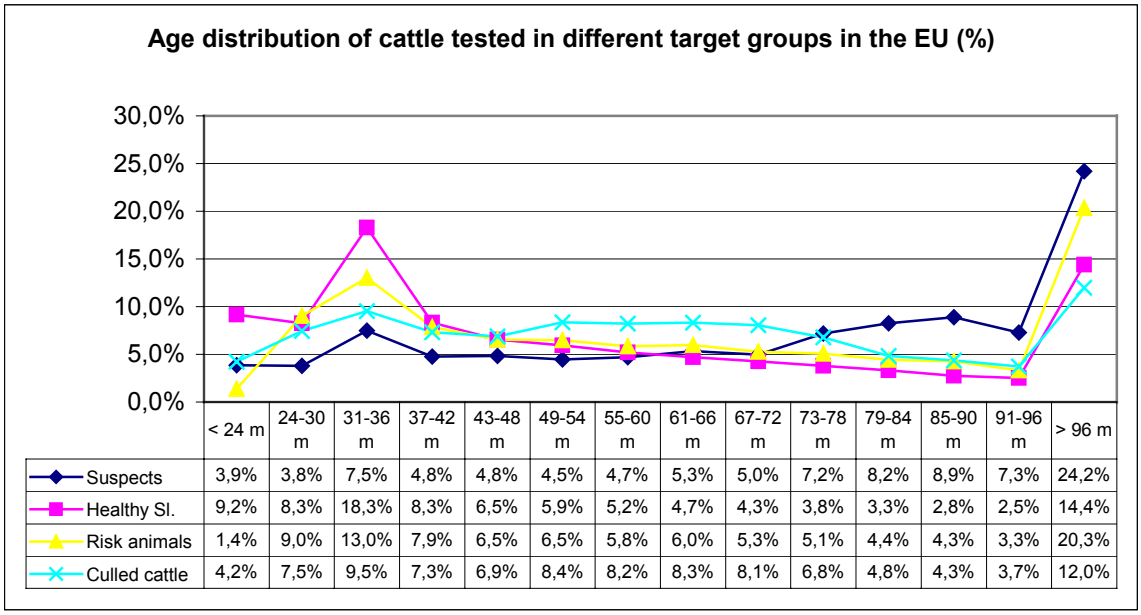
na: not available

Table 30: Extrapolated age distribution of cattle tested and culled in the frame of BSE eradication

Cattle culled in the frame of BSE eradication																
	BE	**FR**	**DE**	**DK**	**EL**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**AU**	**PT**	**SV**	**FIN**	**UK**	**EU**
< 24 m	67	97	121	2	0	947	83	890	0	na	0	51	0	0	0	**2.258**
24-30 m	447	1.781	73	72	0	389	830	398	0	na	0	6	0	0	0	**3.996**
31-36 m	455	1.970	384	72	0	307	1.576	317	0	na	0	18	0	0	0	**5.099**
37-42 m	317	1.557	136	40	0	300	1.244	313	0	na	0	8	0	0	0	**3.917**
43-48 m	377	1.664	202	47	0	307	830	244	0	na	0	7	0	0	0	**3.678**
49-54 m	256	1.175	516	75	0	310	1.824	319	0	na	0	9	0	0	0	**4.485**
55-60 m	329	1.310	177	402	0	352	1.493	318	0	na	0	26	0	0	0	**4.407**
61-66 m	208	995	330	696	0	272	1.659	241	0	na	0	55	0	0	0	**4.456**
67-72 m	207	1.043	161	649	0	358	1.576	241	0	na	0	85	0	0	0	**4.320**
73-78 m	147	783	250	533	0	209	1.410	183	0	na	0	124	0	0	0	**3.640**
79-84 m	124	806	114	315	0	256	664	147	0	na	0	162	0	0	0	**2.589**
85-90 m	84	571	97	83	0	173	1.078	135	0	na	0	108	0	0	0	**2.330**
91-96 m	66	539	30	18	0	182	995	85	0	na	0	85	0	0	0	**2.001**
> 96 m	192	1.590	34	61	0	511	3.400	204	0	na	0	418	0	0	0	**6.411**
Total	**3.277**	**15.881**	**2.626**	**3.066**	**0**	**4.875**	**18.662**	**4.036**	**0**	**na**	**0**	**1.163**	**0**	**0**	**0**	**53.586**

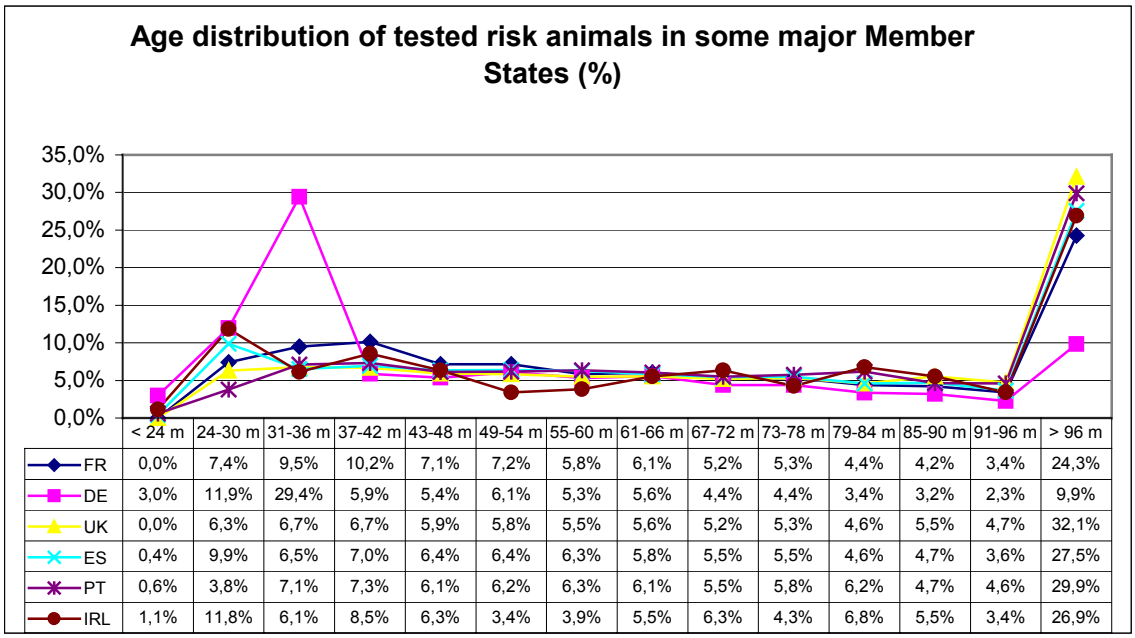
na: not available

Figure 24: Extrapolated mean age distribution of cattle tested in different target groups in the EU:



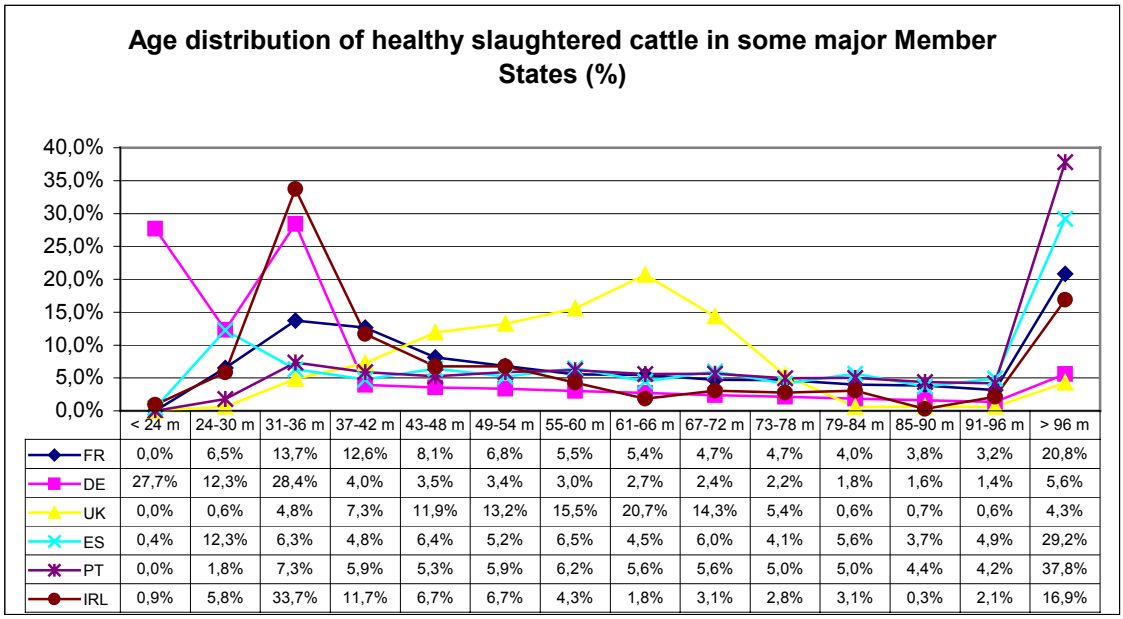
	< 24 m	24-30 m	31-36 m	37-42 m	43-48 m	49-54 m	55-60 m	61-66 m	67-72 m	73-78 m	79-84 m	85-90 m	91-96 m	> 96 m
Suspects	3,9%	3,8%	7,5%	4,8%	4,8%	4,5%	4,7%	5,3%	5,0%	7,2%	8,2%	8,9%	7,3%	24,2%
Healthy SI.	9,2%	8,3%	18,3%	8,3%	6,5%	5,9%	5,2%	4,7%	4,3%	3,8%	3,3%	2,8%	2,5%	14,4%
Risk animals	1,4%	9,0%	13,0%	7,9%	6,5%	6,5%	5,8%	6,0%	5,3%	5,1%	4,4%	4,3%	3,3%	20,3%
Culled cattle	4,2%	7,5%	9,5%	7,3%	6,9%	8,4%	8,2%	8,3%	8,1%	6,8%	4,8%	4,3%	3,7%	12,0%

Figure 25: Extrapolated age distribution in risk animals tested in some major Member States:



	< 24 m	24-30 m	31-36 m	37-42 m	43-48 m	49-54 m	55-60 m	61-66 m	67-72 m	73-78 m	79-84 m	85-90 m	91-96 m	> 96 m
FR	0,0%	7,4%	9,5%	10,2%	7,1%	7,2%	5,8%	6,1%	5,2%	5,3%	4,4%	4,2%	3,4%	24,3%
DE	3,0%	11,9%	29,4%	5,9%	5,4%	6,1%	5,3%	5,6%	4,4%	4,4%	3,4%	3,2%	2,3%	9,9%
UK	0,0%	6,3%	6,7%	6,7%	5,9%	5,8%	5,5%	5,6%	5,2%	5,3%	4,6%	5,5%	4,7%	32,1%
ES	0,4%	9,9%	6,5%	7,0%	6,4%	6,4%	6,3%	5,8%	5,5%	5,5%	4,6%	4,7%	3,6%	27,5%
PT	0,6%	3,8%	7,1%	7,3%	6,1%	6,2%	6,3%	6,1%	5,5%	5,8%	6,2%	4,7%	4,6%	29,9%
IRL	1,1%	11,8%	6,1%	8,5%	6,3%	3,4%	3,9%	5,5%	6,3%	4,3%	6,8%	5,5%	3,4%	26,9%

Figure 26: Extrapolated age distribution in healthy slaughtered cattle tested in some major Member States:



	< 24 m	24-30 m	31-36 m	37-42 m	43-48 m	49-54 m	55-60 m	61-66 m	67-72 m	73-78 m	79-84 m	85-90 m	91-96 m	> 96 m
FR	0,0%	6,5%	13,7%	12,6%	8,1%	6,8%	5,5%	5,4%	4,7%	4,7%	4,0%	3,8%	3,2%	20,8%
DE	27,7%	12,3%	28,4%	4,0%	3,5%	3,4%	3,0%	2,7%	2,4%	2,2%	1,8%	1,6%	1,4%	5,6%
UK	0,0%	0,6%	4,8%	7,3%	11,9%	13,2%	15,5%	20,7%	14,3%	5,4%	0,6%	0,7%	0,6%	4,3%
ES	0,4%	12,3%	6,3%	4,8%	6,4%	5,2%	6,5%	4,5%	6,0%	4,1%	5,6%	3,7%	4,9%	29,2%
PT	0,0%	1,8%	7,3%	5,9%	5,3%	5,9%	6,2%	5,6%	5,6%	5,0%	5,0%	4,4%	4,2%	37,8%
IRL	0,9%	5,8%	33,7%	11,7%	6,7%	6,7%	4,3%	1,8%	3,1%	2,8%	3,1%	0,3%	2,1%	16,9%

Comments on the age distribution of tested cattle

The data in the tables and the figures, in particular those concerning healthy slaughtered cattle, indicate differences between Member States with regard to the testing programme in young cattle. In the United Kingdom, the testing of healthy slaughtered cattle was concentrated on 4 to 6 year old cattle born after the introduction of the extended feed ban (August 1996). A high number of tested young cattle may decrease the overall prevalence of BSE and the prevalence in a target group. Therefore differences in prevalence of BSE between Member States should be compared within the same age and target group.

4.7 PREVALENCE OF BSE IN DIFFERENT AGE CATEGORIES

Table 31: Prevalence of BSE in cattle (positive cases per 10.000 tests) of different age: total population and suspects:

All cattle												
	BE	**FR**	**DE**	**DK**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**PT**	**UK**	**EU**
< 24 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	**0,00**
24-30 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	**0,00**
31-36 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	1,69	0,51	**0,01**
37-42 m	0,00	0,00	0,00	0,00	0,44	0,00	0,00	0,00	0,00	2,04	0,00	**0,02**
43-48 m	0,00	0,00	0,00	0,28	0,00	0,42	0,00	0,00	0,00	0,00	0,00	**0,04**
49-54 m	0,00	0,32	0,37	0,00	2,49	0,00	0,00	0,00	0,20	2,08	1,67	**0,38**
55-60 m	0,46	0,00	0,93	0,00	3,82	0,33	0,57	0,00	0,45	7,94	0,92	**0,63**
61-66 m	1,34	0,45	0,99	0,00	6,66	1,19	0,62	0,00	0,96	10,74	1,25	**1,07**
67-72 m	2,46	1,24	1,68	0,46	6,45	4,41	1,12	0,00	1,33	17,19	3,64	**2,12**
73-78 m	2,47	2,09	3,51	0,00	11,84	15,86	1,96	11,93	1,39	21,15	24,57	**4,50**
79-84 m	1,22	3,75	3,83	0,70	5,33	26,12	1,97	0,00	0,33	18,46	97,15	**7,21**
85-90 m	1,96	4,09	1,89	0,00	8,78	106,52	0,96	0,00	0,75	32,50	144,55	**10,84**
91-96 m	3,13	3,09	1,15	0,00	3,32	22,24	1,49	0,00	0,49	34,00	157,71	**9,49**
> 96 m	0,75	0,62	0,44	0,00	1,64	8,66	0,20	0,00	0,46	8,26	93,62	**5,57**

Passive surveillance (suspects)												
	BE	**FR**	**DE**	**DK**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**PT**	**UK**	**EU**
< 24 m	0	0	0	0	0	0	0	-	na	0	0	**0**
24-30 m	0	0	0	0	0	0	0	-	na	0	0	**0**
31-36 m	0	0	0	0	0	0	0	-	na	0	0	**0**
37-42 m	0	0	0	0	0	0	0	-	na	0	0	**0**
43-48 m	0	0	0	0	0	450	0	-	na	0	0	**81**
49-54 m	0	556	0	0	0	0	0	-	na	1.419	363	**261**
55-60 m	0	0	636	0	3.279	474	0	-	na	1.419	0	**415**
61-66 m	0	0	1.192	0	3.934	0	0	-	na	414	307	**438**
67-72 m	769	2.500	2.201	0	3.934	1.350	0	-	na	0	1.090	**1.333**
73-78 m	1.429	1.071	2.861	0	9.836	3.085	0	-	na	662	3.435	**2.450**
79-84 m	0	4.167	-	0	0	4.908	0	-	na	2.483	4.907	**3.927**
85-90 m	0	3.333	795	0	3.934	6.249	0	-	na	4.139	8.480	**5.929**
91-96 m	1.667	3.182	-	0	9.836	5.317	0	-	na	3.612	7.986	**5.891**
> 96 m	0	769	0	0	2.459	1.535	0	-	na	2.045	8.061	**4.405**

na: not available

Table 32: Prevalence of BSE in cattle (positive cases per 10.000 tests) of different age: active monitoring and risk animals:

Active monitoring												
	BE	**FR**	**DE**	**DK**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**PT**	**UK**	**EU**
< 24 m	0,00	-	0,00	0,00	0,00	0,00	0,00	-	na	0,00	0,00	**0,00**
24-30 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	na	0,00	0,00	**0,00**
31-36 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	na	1,69	0,51	**0,01**
37-42 m	0,00	0,00	0,00	0,00	0,44	0,00	0,00	0,00	na	2,04	0,00	**0,02**
43-48 m	0,00	0,00	0,00	0,28	0,00	0,21	0,00	0,00	na	0,00	0,00	**0,03**
49-54 m	0,00	0,27	0,37	0,00	2,49	0,00	0,00	0,00	na	0,00	1,34	**0,34**
55-60 m	0,46	0,00	0,82	0,00	3,12	0,00	0,57	0,00	na	5,97	0,92	**0,55**
61-66 m	1,34	0,45	0,77	0,00	5,71	1,19	0,62	0,00	na	8,64	1,00	**0,96**
67-72 m	2,15	0,91	1,29	0,46	5,69	3,21	1,12	0,00	na	17,25	2,65	**1,79**
73-78 m	1,77	1,89	3,09	0,00	10,30	10,28	1,96	11,96	na	18,87	12,88	**3,62**
79-84 m	1,22	2,98	3,67	0,70	5,33	16,36	1,97	0,00	na	11,57	51,08	**5,36**
85-90 m	1,96	3,05	1,70	0,00	7,61	70,48	0,96	0,00	na	19,02	68,08	**7,04**
91-96 m	1,88	2,41	1,15	0,00	2,85	14,45	1,49	0,00	na	22,74	75,06	**5,88**
> 96 m	0,75	0,59	0,44	0,00	1,25	6,39	0,20	0,00	na	5,95	59,85	**3,93**

Risk animals (fallen stock + emergency slaughter + clinical signs ad ante-mortem)												
	BE	**FR**	**DE**	**DK**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**PT**	**UK**	**EU**
< 24 m	0,00	-	0,00	0,00	0,00	0,00	0,00	-	na	0,00	0,00	**0,00**
24-30 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	na	0,00	0,00	**0,00**
31-36 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	na	0,00	0,78	**0,07**
37-42 m	0,00	0,00	0,00	0,00	2,08	0,00	0,00	0,00	na	0,00	0,00	**0,11**
43-48 m	0,00	0,00	0,00	2,88	0,00	0,00	0,00	0,00	na	0,00	0,00	**0,14**
49-54 m	0,00	2,02	1,27	0,00	11,36	0,00	0,00	0,00	na	0,00	2,72	**1,93**
55-60 m	7,77	0,00	2,90	0,00	18,50	0,00	2,45	0,00	na	11,12	2,90	**3,05**
61-66 m	8,05	4,18	0,69	0,00	17,38	4,56	1,34	0,00	na	11,62	2,86	**3,59**
67-72 m	9,93	4,19	6,16	0,00	29,20	13,89	4,25	0,00	na	38,44	6,13	**7,63**
73-78 m	9,95	12,97	9,66	0,00	31,52	59,26	3,19	112,36	na	36,69	18,82	**15,73**
79-84 m	5,90	21,45	12,58	5,98	34,78	53,85	5,34	0,00	na	34,35	52,77	**26,35**
85-90 m	6,37	21,42	6,03	0,00	21,61	93,22	4,29	0,00	na	60,50	74,69	**34,14**
91-96 m	17,75	13,84	6,82	0,00	15,90	74,36	2,50	0,00	na	46,02	83,01	**32,51**
> 96 m	8,89	3,58	1,95	0,00	4,73	31,83	0,54	0,00	na	14,15	65,01	**22,49**

na: not available

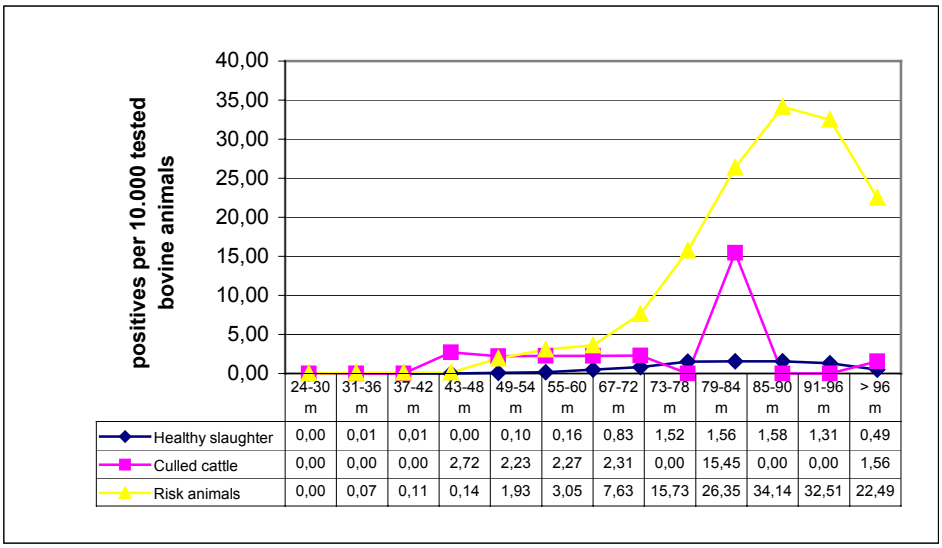
Table 33: Prevalence of BSE in cattle (positive cases per 10.000 tests) of different age: healthy slaughtered and culled bovine animals:

Healthy slaughter												
	BE	**FR**	**DE**	**DK**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**PT**	**UK**	**EU**
< 24 m	0,00	-	0,00	0,00	0,00	0,00	0,00	-	na	-	0,00	**0,00**
24-30 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-	na	-	0,00	**0,00**
31-36 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	na	2,04	0,00	**0,01**
37-42 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	na	2,55	0,00	**0,01**
43-48 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	na	0,00	0,00	**0,00**
49-54 m	0,00	0,10	0,11	0,00	0,52	0,00	0,00	0,00	na	0,00	0,53	**0,10**
55-60 m	0,00	0,00	0,36	0,00	0,41	0,00	0,23	0,00	na	4,86	0,00	**0,16**
61-66 m	0,87	0,06	0,66	0,00	2,99	0,00	0,49	0,00	na	8,03	0,34	**0,50**
67-72 m	1,65	0,58	0,45	0,53	1,80	0,00	0,54	0,00	na	13,28	0,97	**0,83**
73-78 m	1,15	0,73	1,84	0,00	5,19	1,19	1,75	0,00	na	15,03	5,16	**1,52**
79-84 m	0,88	1,02	2,15	0,00	0,95	4,28	1,35	0,00	na	6,01	37,14	**1,56**
85-90 m	1,60	1,16	0,90	0,00	4,39	37,40	0,38	0,00	na	10,28	0,00	**1,58**
91-96 m	0,68	1,28	0,27	0,00	1,09	3,05	1,31	0,00	na	17,88	0,00	**1,31**
> 96 m	0,00	0,26	0,19	0,00	0,64	1,26	0,15	0,00	na	4,36	13,09	**0,49**

Cattle culling as part of BSE eradication												
	BE	**FR**	**DE**	**DK**	**ES**	**IRL**	**IT**	**LUX**	**NL**	**PT**	**UK**	**EU**
< 24 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-	na	0,00	-	**0,00**
24-30 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-	na	0,00	-	**0,00**
31-36 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-	na	0,00	-	**0,00**
37-42 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-	na	0,00	-	**0,00**
43-48 m	0,00	0,00	0,00	0,00	0,00	12,05	0,00	-	na	0,00	-	**2,72**
49-54 m	0,00	0,00	19,39	0,00	0,00	0,00	0,00	-	na	0,00	-	**2,23**
55-60 m	0,00	0,00	56,41	0,00	0,00	0,00	0,00	-	na	0,00	-	**2,27**
61-66 m	0,00	0,00	30,35	0,00	0,00	0,00	0,00	-	na	0,00	-	**2,24**
67-72 m	0,00	0,00	0,00	0,00	0,00	6,34	0,00	-	na	0,00	-	**2,31**
73-78 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-	na	0,00	-	**0,00**
79-84 m	0,00	12,41	0,00	0,00	0,00	45,21	0,00	-	na	0,00	-	**15,45**
85-90 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-	na	0,00	-	**0,00**
91-96 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-	na	0,00	-	**0,00**
> 96 m	0,00	0,00	0,00	0,00	0,00	0,00	0,00	-	na	23,90	-	**1,56**

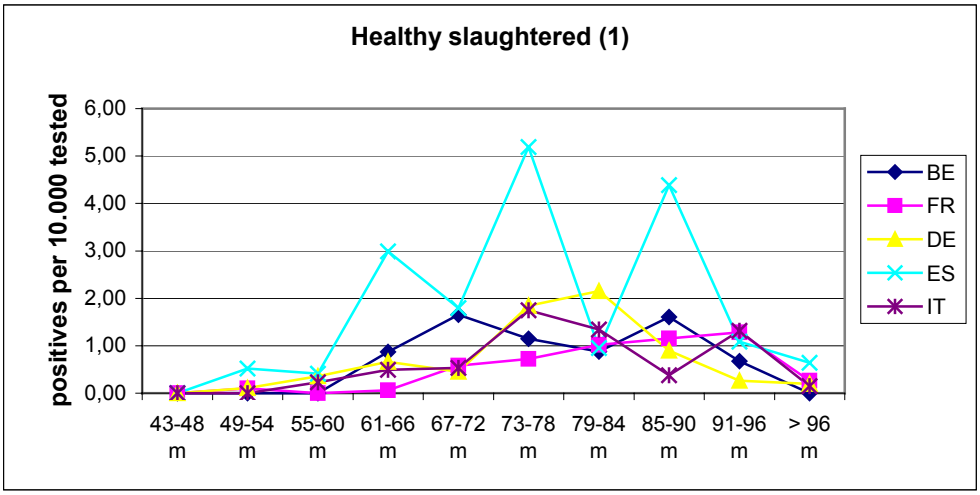
na: not available

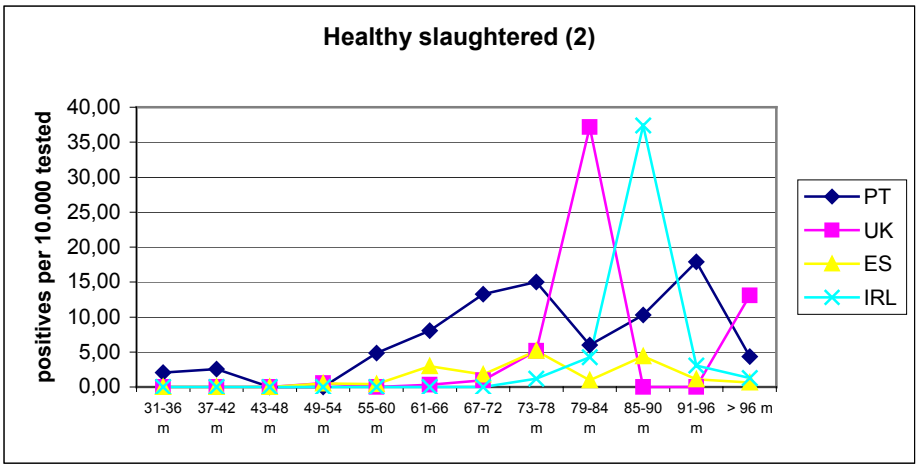
Figure 27: Age distribution of the BSE prevalence per target group:



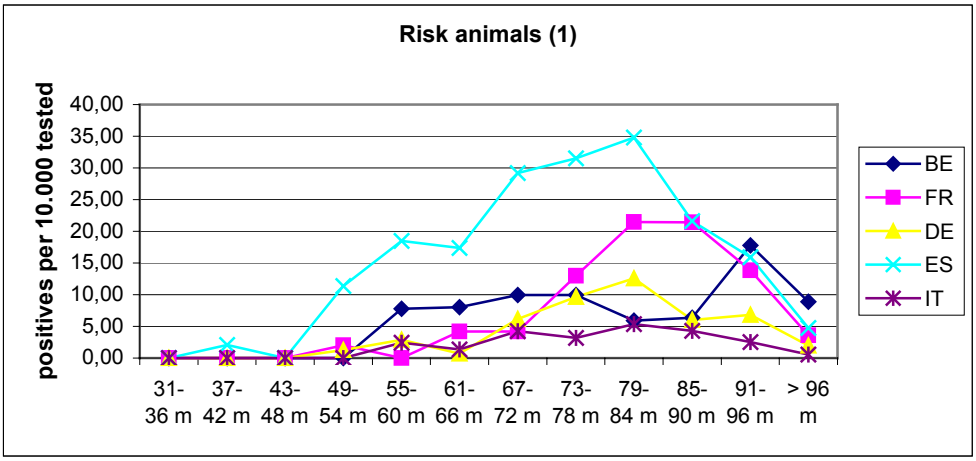
	24-30 m	31-36 m	37-42 m	43-48 m	49-54 m	55-60 m	67-72 m	73-78 m	79-84 m	85-90 m	91-96 m	> 96 m
Healthy slaughter	0,00	0,01	0,01	0,00	0,10	0,16	0,83	1,52	1,56	1,58	1,31	0,49
Culled cattle	0,00	0,00	0,00	2,72	2,23	2,27	2,31	0,00	15,45	0,00	0,00	1,56
Risk animals	0,00	0,07	0,11	0,14	1,93	3,05	7,63	15,73	26,35	34,14	32,51	22,49

Figures 28 and 29: BSE prevalence (positive per 10.000 cattle tested) in healthy slaughtered cattle in Member States with more than 10 positive cases in 2002. Spain is used as a reference.





Figures 30 and 31: BSE prevalence (positive per 10.000 cattle tested) in risk animals in Member States with more than 10 positive case in 2002. Spain is used as a reference in both figures.



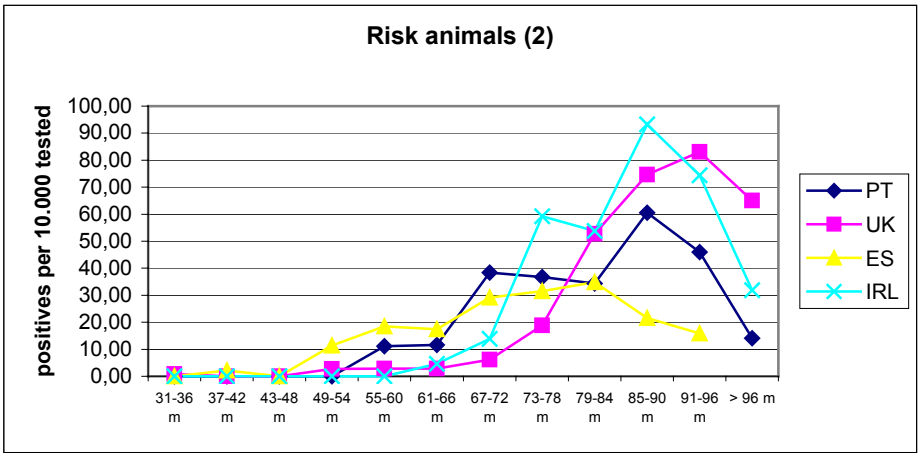
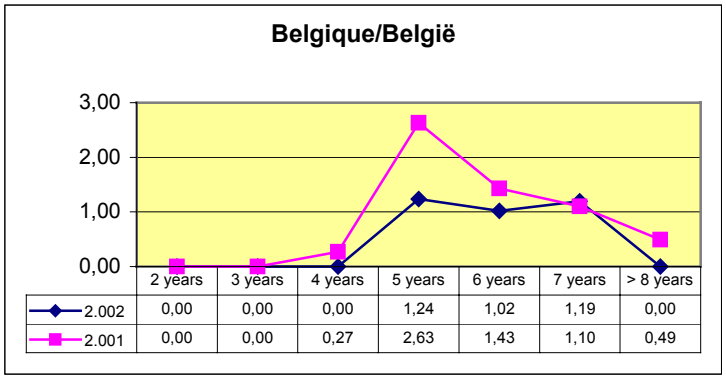
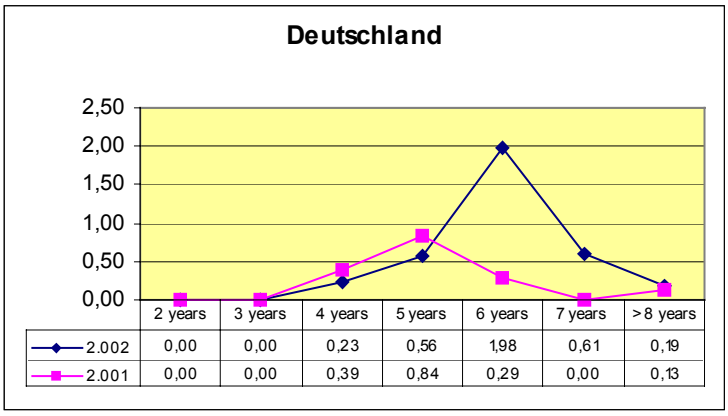


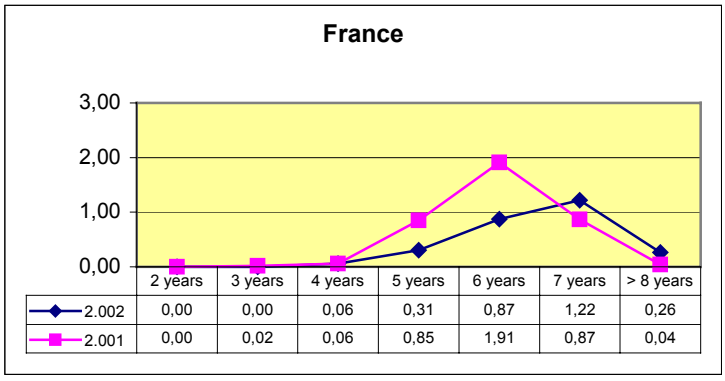
Figure 32: Comparison of the prevalence of BSE in healthy slaughtered cattle of different age in 2001 and 2002:



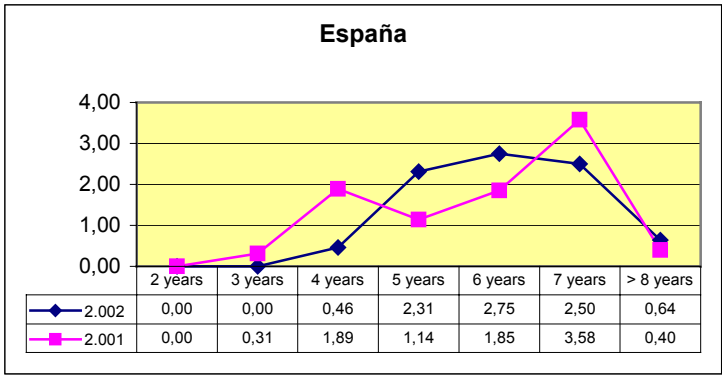
	2 years	3 years	4 years	5 years	6 years	7 years	> 8 years
2.002	0,00	0,00	0,00	1,24	1,02	1,19	0,00
2.001	0,00	0,00	0,27	2,63	1,43	1,10	0,49



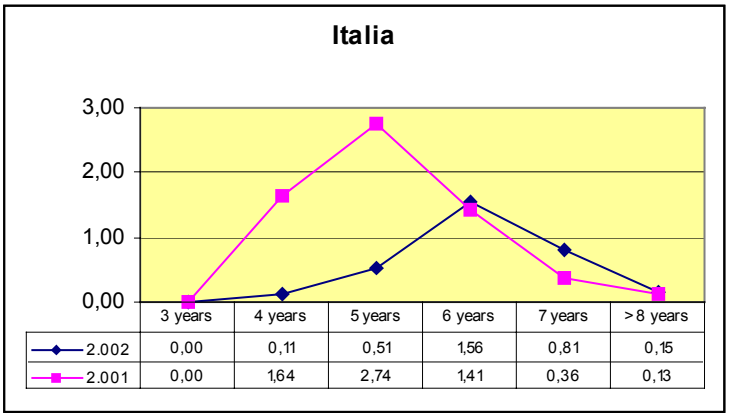
	2 years	3 years	4 years	5 years	6 years	7 years	> 8 years
2.002	0,00	0,00	0,23	0,56	1,98	0,61	0,19
2.001	0,00	0,00	0,39	0,84	0,29	0,00	0,13



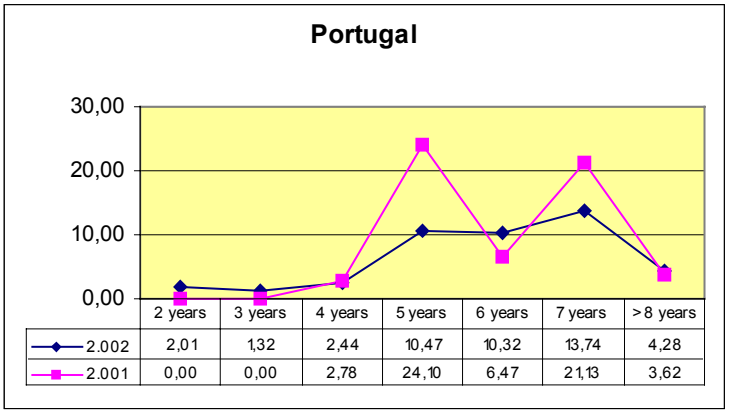
	2 years	3 years	4 years	5 years	6 years	7 years	> 8 years
2.002	0,00	0,00	0,06	0,31	0,87	1,22	0,26
2.001	0,00	0,02	0,06	0,85	1,91	0,87	0,04



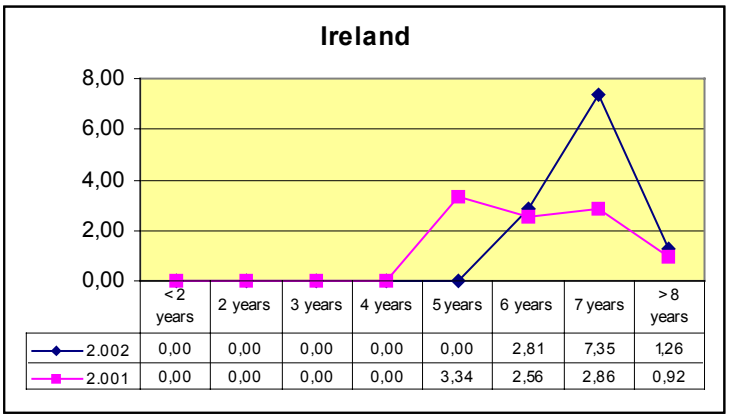
	2 years	3 years	4 years	5 years	6 years	7 years	> 8 years
2.002	0,00	0,00	0,46	2,31	2,75	2,50	0,64
2.001	0,00	0,31	1,89	1,14	1,85	3,58	0,40



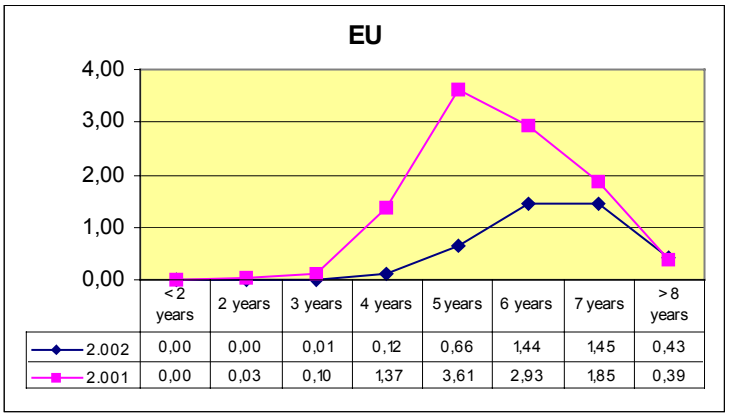
	3 years	4 years	5 years	6 years	7 years	> 8 years
2.002	0,00	0,11	0,51	1,56	0,81	0,15
2.001	0,00	1,64	2,74	1,41	0,36	0,13



	2 years	3 years	4 years	5 years	6 years	7 years	> 8 years
2.002	2,01	1,32	2,44	10,47	10,32	13,74	4,28
2.001	0,00	0,00	2,78	24,10	6,47	21,13	3,62



	< 2 years	2 years	3 years	4 years	5 years	6 years	7 years	> 8 years
2.002	0,00	0,00	0,00	0,00	0,00	2,81	7,35	1,26
2.001	0,00	0,00	0,00	0,00	3,34	2,56	2,86	0,92



	< 2 years	2 years	3 years	4 years	5 years	6 years	7 years	> 8 years
2.002	0,00	0,00	0,01	0,12	0,66	1,44	1,45	0,43
2.001	0,00	0,03	0,10	1,37	3,61	2,93	1,85	0,39

Comments on the prevalence of BSE in different age groups

Tables 31 to 33 allow a comparison between Member States within a particular target and age group and is illustrated in Figures 28 to 31. The data also indicate differences between Member States with regard to the age group with the highest prevalence, which may indicate different peak periods of exposure to BSE. However, the results should be interpreted with caution if the number of positive cases within a target and age group is limited.

Figure 32 illustrates the evolution over one year of the prevalence per age group in healthy slaughtered bovine animals. It indicates a lower prevalence and a shift to older bovine animals in 2002 compared to 2001 in most Member States.

5. SUMMARY OF SCRAPIE TESTING IN OVINE AND CAPRINE ANIMALS DURING 2002

The information is extracted directly from the monthly reports since January 2002. The monthly information is often updated and/or corrected by the Member States in subsequent reports. The information shown in the following summaries is updated according to the information received on 15 May 2003. The reports from Luxembourg did not provide separate data on sheep and goats. In the following tables, all Luxembourg data are presented as data on sheep.

Information on the population was obtained from Eurostat. The figures of December 2002 on ewes and ewe-lambs put to the ram were considered as representing the adult sheep population. Figures of December 2002 on goats which have already kidded and goats mated were considered as representing the adult population.

5.1 SAMPLING

Table 34: Number of tests performed in ovine animals per target group

	Risk animals	Healthy slaughtered	Suspects	Culling	Total
Belgique/België	737	2.131	9	428	3.305
Danmark	397	622	7	0	1.026
Deutschland	18.845	12.718	1.676	1.498	34.737
Ellas	466	23.950	115	0	24.531
España	10.905	31.484	79	2.270	44.738
France	17.607	33.829	142	12.688	64.266
Ireland	5.222	54.813	122	21.884	82.041
Italia	2.762	20.499	12	971	24.244
Luxembourg	79	214	0	0	293
Nederland	3.864	19.642	0	0	23.506
Österreich	2.232	2.017	49	0	4.298
Portugal	4.333	1.276	0	0	5.609
Suomi/Finland	349	2.053	0	16	2.418
Sverige	1.233	3.992	26	0	5.251
United Kingdom	1.362	31.169	536	0	33.067
EU 15	**70.393**	**240.409**	**2.773**	**39.755**	**353.330**

Table 35: Number of tests performed in caprine animals per target group

	Risk animals	Healthy slaughtered	Suspects	Culling	Total
Belgique/België	86	64	1	0	151
Danmark	95	66	4	0	165
Deutschland	1.119	506	31	0	1.656
Ellas	282	9.210	13	0	9.505
España	901	4.389	7	78	5.375
France	12.371	14.657	0	1.342	28.370
Ireland	1	0	0	0	1
Italia	574	3.104	3	20	3.701
Luxembourg	0	0	0	0	0
Nederland	932	3.120	0	0	4.052
Österreich	451	127	0	0	578
Portugal	364	188	0	0	552
Suomi/Finland	47	58	0	140	245
Sverige	41	33	4	0	78
United Kingdom	6	9	0	0	15
EU 15	**17.270**	**35.531**	**63**	**1.580**	**54.444**

Table 36: Monitoring in ovine animals in relation to the adult population

	Adult population (x1000)	Risk animals		Healthy slaughtered	
		No. of tests	% tests/ Population	No. of tests	% tests/ population
Belgique/België	na	737	-	2.131	-
Danmark	73	397	0,544%	622	0,85%
Deutschland	1.592	18.845	1,184%	12.718	0,80%
Ellas	6.692	466	0,007%	23.950	0,36%
España	17.665	10.905	0,062%	31.484	0,18%
France	7.012	17.607	0,251%	33.829	0,48%
Ireland	3.730	5.222	0,140%	54.813	1,47%
Italia	7.290	2.762	0,038%	20.499	0,28%
Luxembourg	7	79	1,082%	214	2,93%
Nederland	975	3.864	0,396%	19.642	2,01%
Österreich	203	2.232	1,100%	2.017	0,99%
Portugal	2.283	4.333	0,190%	1.276	0,06%
Suomi/Finland	48	349	0,727%	2.053	4,28%
Sverige	198	1.233	0,623%	3.992	2,02%
United Kingdom	16.429	1.362	0,008%	31.169	0,19%

na: not available

Table 37: Monitoring in caprine animals in relation to the adult population

	Adult population (x1000)	Risk animals		Healthy slaughtered	
		No. of tests	% tests/ population	No. of tests	% tests/ population
Belgique/België	na	86	-	64	-
Danmark	na	95	-	66	-
Deutschland	na	1.119	-	506	-
Ellas	3898	282	0,007%	9.210	0,24%
España	2330	901	0,039%	4.389	0,19%
France	1026	12.371	1,206%	14.657	1,43%
Ireland	na	1	-	0	-
Italia	821	574	0,070%	3.104	0,38%
Luxembourg	na	0	-	0	-
Nederland	na	932	-	3.120	-
Österreich	38	451	1,187%	127	0,33%
Portugal	392	364	0,093%	188	0,05%
Suomi/Finland	3,8	47	1,237%	58	1,53%
Sverige	na	41	-	33	-
United Kingdom	49	6	0,012%	9	0,02%

na: not available

5.2 POSITIVE CASES

Table 38: Total positives detected in ovine and caprine animals

	Sheep			Goats			Number of Herds**
	Total tests	Total Positives	Ratio*	Total tests	Total Positives	Ratio*	
Belgique/België	3.305	25	75,6	151	0	0,0	5
Danmark	1.026	0	0,0	165	0	0,0	0
Deutschland	34.737	16	4,6	1.656	0	0,0	12
Ellas	24.531	99	40,4	9.505	9	9,5	
España	44.738	41	9,2	5.375	1	1,9	15
France	64.266	443	68,9	28.370	18	6,3	154
Ireland	82.041	330	40,2	1	0	0,0	95
Italia	24.244	121	49,9	3.701	9	24,3	36
Luxembourg	293	0	0,0	0	0	-	0
Nederland	23.506	40	17,0	4.052	0	0,0	46
Österreich	4.298	0	0,0	578	0	0,0	0
Portugal	5.609	0	0,0	552	0	0,0	0
Suomi/Finland	2.418	0	0,0	245	4	163,3	2
Sverige	5.251	0	0,0	78	0	0,0	0
United Kingdom	33.067	461	139,4	15	0	0,0	
EU 15	**353.330**	**1576**	**44,6**	**54.444**	**41**	**7,5**	**353**

* positives per 10.000 animals tested.

** since 1 January 2002. This figure may be higher than the number of positive cases if these cases were only reported from 1 April 2002 onwards.

Table 39: Positives detected by active monitoring in ovine and caprine animal

	Sheep			Goats		
	No. of Tests	No. of Positives	Ratio*	No. of Tests	No. of Positives	Ratio*
Belgique/België	3.296	23	69,8	150	0	0,0
Danmark	1.019	0	0,0	161	0	0,0
Deutschland	33.061	12	3,6	1.625	0	0,0
Ellas	24.416	55	22,5	9.492	5	5,3
España	44.659	33	7,4	5.368	1	1,9
France	64.124	319	49,7	28.370	18	6,3
Ireland	81.919	283	34,5	1	0	0,0
Italia	24.232	112	46,2	3.698	9	24,3
Luxembourg	293	0	0,0	0	0	-
Nederland	23.506	40	17,0	4.052	0	0,0
Österreich	4.249	0	0,0	578	0	0,0
Portugal	5.609	0	0,0	552	0	0,0
Suomi/Finland	2.418	0	0,0	245	4	163,3
Sverige	5.225	0	0,0	74	0	0,0
United Kingdom	32.531	40	12,3	15	0	0,0
EU 15	**350.557**	**917**	**26,2**	**54.381**	**37**	**6,8**

* positives per 10.000 animals tested.

Comments on positive cases

The prevalence of TSE in sheep and goats is higher than in cattle. In particular, by active monitoring, the ratio of TSE (number of positives / number of tested animals) is more than 10x higher in sheep and more than 4x higher in goats than in cattle.

The overall ratio in different Member States should be compared with caution since the monitoring may have been targeted on risk animals in some Member States. In addition, the results of different target groups are interdependent and should not be viewed in isolation. For example, an effective passive surveillance will increase the number of cases found in suspects and may at the same time decrease the ratio of positive cases in the other target groups, in particular in fallen stock.

5.3 TESTING BY TARGET GROUP

Table 40: Positives in healthy slaughtered ovine and caprine animals

	Sheep			Goats		
	Total Tests	Total Positives	Ratio*	Total tests	Total Positives	Ratio*
Belgique/België	2.131	1	4,7	64	0	0,0
Danmark	622	0	0,0	66	0	0,0
Deutschland	12.718	5	3,9	506	0	0,0
Ellas	22.950	46	19,2	9.210	5	5,4
España	31.484	8	2,5	4.389	0	0,0
France	33.829	32	9,5	14.657	2	1,4
Ireland	54.813	13	2,4	0	0	-
Italia	20.499	27	13,2	3.104	3	9,7
Luxembourg	214	0	0,0	0	0	-
Nederland	19.642	29	14,8	3.120	0	0,0
Österreich	2.017	0	0,0	127	0	0,0
Portugal	1.276	0	0,0	188	0	0,0
Suomi/Finland	2.053	0	0,0	58	1	172,4
Sverige	3.992	0	0,0	33	0	0,0
United Kingdom	31.169	33	10,6	9	0	0,0
EU 15	**240.409**	**194**	**8,1**	**35.531**	**11**	**3,1**

* positives per 10.000 animals tested.

Table 41: Positives in risk ovine and caprine animals

	Sheep			Goats		
	No. of Tests	No. Of Positives	Ratio*	No. of Tests	No. of positives	Ratio*
Belgique/België	737	2	27,1	86	0	0,0
Danmark	397	0	0,0	95	0	0,0
Deutschland	18.845	7	3,7	1.119	0	0,0
Ellas	466	9	193,1	282	0	0,0
España	10.905	5	4,6	901	1	11,1
France	17.607	121	68,7	12.371	13	10,5
Ireland	5.222	33	63,2	1	0	0,0
Italia	2.762	23	83,3	574	1	17,4
Luxembourg	79	0	0,0	0	0	-
Nederland	3.864	11	28,5	932	0	0,0
Österreich	2.232	0	0,0	451	0	0,0
Portugal	4.333	0	0,0	372	0	0,0
Suomi/Finland	349	0	0,0	47	0	0,0
Sverige	1.233	0	0,0	41	0	0,0
United Kingdom	1.362	7	51,4	6	0	0,0
EU 15	**70.393**	**218**	**31,0**	**17.270**	**15**	**8,7**

* positives per 10.000 animals tested.

Table 42: Positives in suspect ovine and caprine animals

	Sheep			Goats		
	No. of Tests	No. of Positives	Ratio*	No. of Tests	No. of Positives	Ratio*
Belgique/België	9	2	2.222	1	0	0,0
Danmark	7	0	0,0	4	0	0,0
Deutschland	1.676	4	24	31	0	0,0
Ellas	115	44	3.826	13	4	3076,9
España	79	8	1.013	7	0	0,0
France	142	124	8.732	0	0	-
Ireland	122	47	3.852	0	0	-
Italia	12	9	7.500	3	0	0,0
Luxembourg	0	0	-	0	0	-
Nederland	0	0	-	0	0	-
Österreich	49	0	0,0	0	0	-
Portugal	0	0	-	0	0	-
Suomi/Finland	0	0	-	0	0	-
Sverige	26	0	0,0	4	0	0,0
United Kingdom	536	421	7.854	0	0	-
EU 15	**2.773**	**659**	**2.376**	**63**	**4**	**634,9**

* positives per 10.000 animals tested.

Table 43: Positives in culled ovine and caprine animals

	Sheep			Goats		
	No. of Tests	No. of Positives	Ratio*	No. of tests	No. of positives	Ratio*
Belgique/België	428	20	467,3	0	0	-
Danmark	0	0	-	0	0	-
Deutschland	1.498	0	-	0	0	-
Ellas	0	0	-	0	0	-
España	2.270	20	88,1	78	0	-
France	12.688	166	130,8	1.342	3	22,4
Ireland	21.884	237	108,3	0	0	-
Italia	971	62	638,5	20	5	2.500,0
Luxembourg	0	0	-	0	0	-
Nederland	0	0	-	0	0	-
Österreich	0	0	-	0	0	-
Portugal	0	0	-	0	0	-
Suomi/Finland	16	0	0,0	140	3	214,3
Sverige	0	0	-	0	0	-
United Kingdom	0	0	-	0	0	-
EU 15	**39.755**	**505**	**127,0**	**1.580**	**11**	**69,6**

* positives per 10.000 animals tested.

Comments on positives per target group

The ratio (positive cases / tested animals) is higher in sheep belonging to the risk population (mainly fallen stock) and in animals culled in TSE herds than in healthy slaughtered sheep and goats. The figures on goats should however be interpreted with caution since the number of positives goats was limited. In addition, the results of different target groups are interdependent and should not be viewed in isolation. For example, an effective passive surveillance will increase the number of cases found in suspects and may at the same time decrease the ratio of positive cases in the other target groups, in particular in fallen stock.

5.4 YEAR OF BIRTH AND AGE DISTRIBUTION

Table 44: Year of birth distribution of positive cases in ovine animals of known age in Belgium, France, Germany, Italy and the United Kingdom

		Year of birth distribution										
		< 1994	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total
Belgique/België	**No. of cases**	0	0	0	2	1	0	1	0	0	0	4
	%	0,0%	0,0%	0,0%	50,0%	25,0%	0,0%	25,0%	0,0%	0,0%	0,0%	
Deutschland	**No. of cases**	0	0	0	1	4	1	2	0	0	0	8
	%	0,0%	0,0%	0,0%	12,5%	50,0%	12,5%	25,0%	0,0%	0,0%	0,0%	
España	**No. of cases**	0	0	0	1	2	8	3	2	0	0	16
	%	0,0%	0,0%	0,0%	6,3%	12,5%	50,0%	18,8%	12,5%	0,0%	0,0%	
France	**No. of cases**	2	2	2	6	2	33	21	93	68	6	235
	%	0,9%	0,9%	0,9%	2,6%	0,9%	14,0%	8,9%	39,6%	28,9%	2,6%	
Italia	**No. of cases**	1	0	2	4	6	13	28	19	3	0	76
	%	1,3%	0,0%	2,6%	5,3%	7,9%	17,1%	36,8%	25,0%	3,9%	0,0%	
United Kingdom	**No. of cases**	2	4	15	24	64	93	107	77	23	7	416
	%	0,5%	1,0%	3,6%	5,8%	15,4%	22,4%	25,7%	18,5%	5,5%	1,7%	
EU 6	**No. of cases**	**5**	**6**	**19**	**38**	**80**	**148**	**162**	**191**	**94**	**13**	**756**
	%	**0,7%**	**0,8%**	**2,5%**	**5,0%**	**10,6%**	**19,6%**	**21,4%**	**25,3%**	**12,4%**	**1,7%**	

Figure 33: Year of birth distribution of sheep in the EU

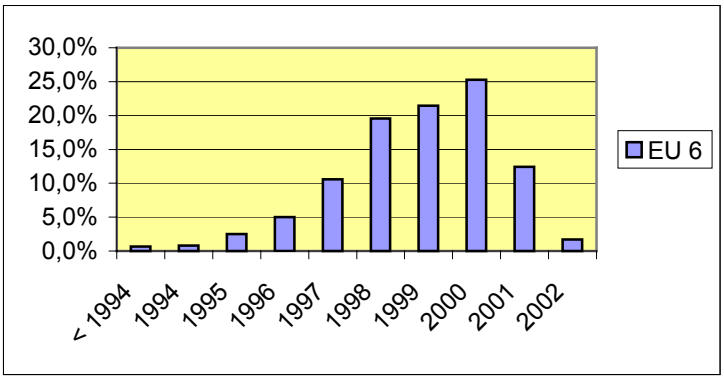
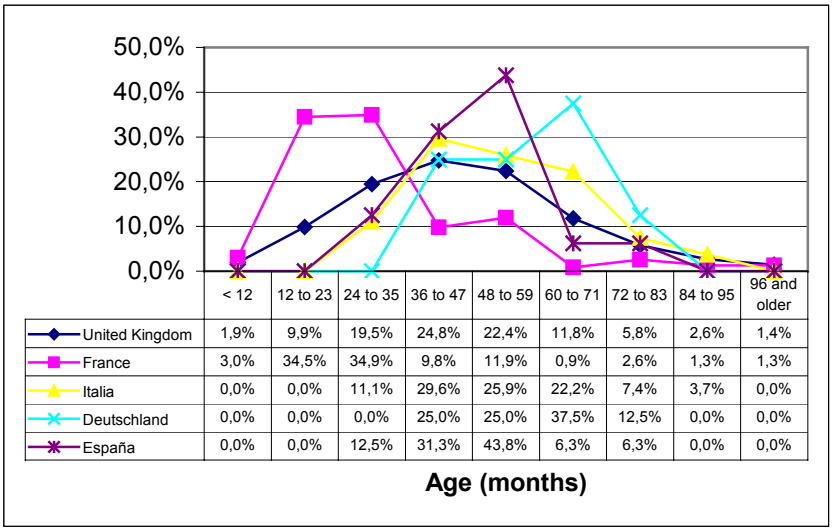


Table 45: Age distribution of positive cases in ovine animals of known age

		Age distribution (months of age at confirmation)									
		< 12	12 to 23	24 to 35	36 to 47	48 to 59	60 to 71	72 to 83	84 to 95	96 and >	Total
Belgique/België	**No. of cases**	0	0	0	1	0	1	2	0	0	4
	%	0,0%	0,0%	0,0%	25,0%	0,0%	25,0%	50,0%	0,0%	0,0%	
Deutschland	**No. of cases**	0	0	0	2	2	3	1	0	0	8
	%	0,0%	0,0%	0,0%	25,0%	25,0%	37,5%	12,5%	0,0%	0,0%	
España	**No. of cases**	0	0	2	5	7	1	1	0	0	16
	%	0,0%	0,0%	12,5%	31,3%	43,8%	6,3%	6,3%	0,0%	0,0%	
France	**No. of cases**	7	81	82	23	28	2	6	3	3	235
	%	3,0%	34,5%	34,9%	9,8%	11,9%	0,9%	2,6%	1,3%	1,3%	
Italia	**No. of cases**	0	0	3	8	7	6	2	1	0	27
	%	0,0%	0,0%	11,1%	29,6%	25,9%	22,2%	7,4%	3,7%	0,0%	
United Kingdom	**No. of cases**	8	41	81	103	93	49	24	11	6	416
	%	1,9%	9,9%	19,5%	24,8%	22,4%	11,8%	5,8%	2,6%	1,4%	
EU 6	**No. of cases**	**15**	**122**	**168**	**142**	**137**	**62**	**36**	**15**	**9**	**706**
	%	**2,1%**	**17,3%**	**23,8%**	**20,1%**	**19,4%**	**8,8%**	**5,1%**	**2,1%**	**1,3%**	

Figure 34: Comparison of the age distribution of positive cases in ovine animals of known age in the United Kingdom, Spain, France, Italy and Germany



	< 12	12 to 23	24 to 35	36 to 47	48 to 59	60 to 71	72 to 83	84 to 95	96 and older
United Kingdom	1,9%	9,9%	19,5%	24,8%	22,4%	11,8%	5,8%	2,6%	1,4%
France	3,0%	34,5%	34,9%	9,8%	11,9%	0,9%	2,6%	1,3%	1,3%
Italia	0,0%	0,0%	11,1%	29,6%	25,9%	22,2%	7,4%	3,7%	0,0%
Deutschland	0,0%	0,0%	0,0%	25,0%	25,0%	37,5%	12,5%	0,0%	0,0%
España	0,0%	0,0%	12,5%	31,3%	43,8%	6,3%	6,3%	0,0%	0,0%

Comments on the year of birth and age distribution

The data in these Tables and Figures show that ovine animals may be positive for TSE at a very young age (< 1 year old). 80% of the positive cases were between 12 and 60 months old. It was not possible to evaluate the prevalence of TSE per age group since the number of samples per age group was not available.

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5.5 GENOTYPING

The genotypes found in positive cases and by random sampling were grouped in accordance with the NSP classification system used in the United Kingdom:

NSP1	**ARR/ARR**	**Genetically most resistant to scrapie**
NSP2	**ARR/ARQ, ARR/ARH, ARR/ AHQ, VRR/ARQ**	**Genetically resistant to scrapie**
NSP3 (ARQ/ARQ)	**ARQ/ARQ**	**Genetically little resistance to scrapie (ARQ/ARQ may be scientifically reviewed)**
NSP3 (others)	**AHQ/AHQ, ARH/ARH, ARH/ ARQ, AHQ/ARH, AHQ/ARQ**	
NSP4	**ARR/VRQ**	**Genetically susceptible to scrapie**
NSP5	**ARQ/VRQ, ARH/VRQ, AHQ/VRQ, VRQ/VRQ**	**Genetically highly susceptible to scrapie**

5.5.1 Genotypes of confirmed TSE cases

Table 46: Distribution of genotypes in TSE positive ovine animals per Member State

	Known genotypes		Distribution of genotypes						
	Number	% of TSE positives	NSP1	NSP2	NSP3	others	NSP4	NSP5	Unknown
Belgique / België	25	100%	0	0,0%	8,0%	8,0%	12,0%	72,0%	0,0%
Deutschland	0	0%	0	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
Ellas	0	0%	0	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
España	19	90%	0	5,3%	84,2%	0,0%	0,0%	10,5%	9,5%
France	61	25%	0	6,6%	50,8%	1,6%	4,9%	36,1%	75,2%
Ireland	0	0%	0	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
Italia	97	100%	0	0,0%	85,6%	14,4%	0,0%	0,0%	0,0%
Nederland	68	97%	0	0,0%	7,4%	1,5%	2,9%	88,2%	2,9%
United Kingdom	45	10%	0	0,0%	4,4%	4,4%	20,0%	71,1%	90,2%
Grand Total	**315**	**31%**	**0**	**1,6%**	**44,1%**	**6,3%**	**5,4%**	**42,5%**	**68,8%**

Table 47: Distribution of genotypes in TSE positive ovine animals per breed

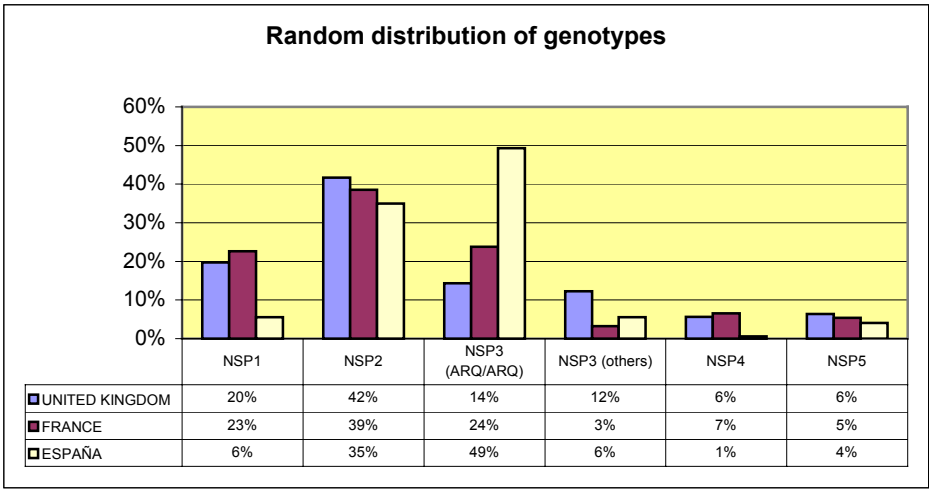
Breed	Genotype						
	NSP1	NSP2	NSP3		NSP4	NSP5	Unknown
			ARQ/ARQ	others			
Aragonese	0	0	4	0	0	0	1
Assaf	0	0	1	0	0	0	0
Awassi	0	0	1	0	0	0	0
Basco-Béarnaise	0	0	3	0	0	2	0
Bergamasca	0	0	1	0	0	0	0
Bizet	0	0	2	0	0	0	0
Blanc du Massif Central	0	0	2	0	0	0	0
Bleu du Maine	0	0	0	0	3	5	0
Castellana	0	0	1	0	0	0	0
Charmoise	0	0	0	0	0	1	0
Comisana	0	0	4	1	0	0	0
Hampshire Down x Texel	0	0	1	0	0	0	0
Lacaune	0	2	7	1	0	4	0
Manchega	0	0	4	0	0	0	0
Manech Tête Noire	0	0	1	0	0	1	0
Manech Tête Rousse	0	2	7	0	0	1	0
Massese	0	0	1	0	0	0	0
Merino	0	0	1	0	0	0	0
Mourérous	0	0	1	0	0	1	0
Navarra	0	0	1	0	0	2	0
Préalpes du Sud	0	0	1	0	0	0	0
Rouge de l'Ouest	0	0	0	0	0	1	0
Sardinian	0	0	51	5	0	0	0
Suffolk	0	0	1	0	0	0	0
Texel x Swifter	0	0	1	1	0	12	0
Mixed	0	1	7	3	3	4	1
Unknown	0	0	35	9	11	100	693
Total Number	**0**	**5**	**139**	**20**	**17**	**134**	**695**
% of known genotypes	**0,0%**	**1,6%**	**44,1%**	**6,3%**	**5,4%**	**42,5%**	

5.5.2 Genotypes in random sampled ovine animals

Table 48: Distribution of genotypes in ovine animals in some Member States (random sampling)

		NSP1	NSP2	NSP3		NSP4	NSP5	Total
				ARQ/ARQ	others			
Danmark	**number**	21	24	36	13	2	4	100
	%	21%	24%	36%	13%	2%	4%	100%
España	**number**	19	120	169	19	2	14	343
	%	6%	35%	49%	6%	1%	4%	100%
Italia	**number**	89	267	170	25	13	13	577
	%	15%	46%	29%	4%	2%	2%	100%
France	**number**	118	201	124	17	34	28	522
	%	23%	39%	24%	3%	7%	5%	100%
Österreich	**number**	9	29	85	25	0	9	157
	%	6%	18%	54%	16%	0%	6%	100%
Portugal	**number**	1	20	48	7	1	5	82
	%	1%	24%	59%	9%	1%	6%	100%
Suomi / Finland	**number**	3	22	63	1	0	4	93
	%	3%	24%	68%	1%	0%	4%	100%
Sverige	**number**	18	24	65	6	2	11	126
	%	14%	19%	52%	5%	2%	9%	100%
United Kingdom	**number**	3.966	8.385	2.883	2.472	1.131	1.291	20.128
	%	20%	42%	14%	12%	6%	6%	100%
EU 9 minus UK	**number**	278	707	760	113	54	88	2.000
	%	14%	35%	38%	6%	3%	4%	100%

Figure 35: Distribution of genotypes by random sampling in France, Spain and the United Kingdom:



5.5.3 Susceptibility

Table 49: Relative susceptibility of genotypes to a TSE infection, based in monitoring results in France, Spain and the United Kingdom (NSP5 = 100%)

		NSP1	NSP2	NSP3		NSP4	NSP5
				ARQ/ARQ	others		
Frequency in random samples	**FR**	23%	39%	24%	3%	7%	5%
	ES	6%	35%	49%	6%	1%	4%
	UK	20%	42%	14%	12%	6%	6%
Frequency in TSE cases	**FR**	0%	7%	51%	2%	5%	36%
	ES	0%	5%	84%	0%	0%	11%
	UK	0%	0%	4%	4%	20%	71%
Relative susceptibility	**FR**	0%	3%	32%	7%	11%	100%
	ES	0%	6%	66%	0%	0%	100%
	UK	0%	0%	3%	3%	32%	100%

Comments on genotypes

Results of the genotyping in 315 ovine animals resulted in the detection of TSE in 22 heterozygote ARR/X genotypes. TSE was not detected in the homozygote resistant ARR/ARR genotype. The prevalence of TSE within a genotype could not be calculated in most Member States since the number of samples per genotype or the distribution of genotype in the sheep population of Member States was not available. Both sets of data from France, Spain and the United Kingdom were available, resulting in the calculations in Table 49. The classification of the ARQ/ARQ genotype as NSP3 seems correct in the United Kingdom, however in France and Spain the susceptibility of this genotype appeared to be between NSP 4 and 5. The results are, however, limited and should be interpreted with caution.

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