RABIES BULLETIN EUROPE - Vol. 10/No 3/1986

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1. INTRODUCTION

This BULLETIN describes the reported rabies cases in Europe for the third quarter 1986. The situation in general appears under 2., and in individual countries under 2.1 to 2.27.

Rabies data for the prevailing quarter have not yet been received for the European part of the Union of Soviet Socialist Republics (USSR). For Poland (POL) and Turkey (TUR) data for September 1986 were not received before going to press. These September data will appear in the annual figures for 1986 published in the next issue of this BULLETIN.

In the miscellaneous section an epidemiological analysis of rabies post-exposure vaccination in humans in Poland with data for 1985 is presented under 3.1. 3.2 reports on two recent conferences on rabies in Tübingen and Washington. Under 3.3 field trial areas of oral fox vaccination against rabies in Europe are described, supplemented by a map in the Annex.

The rabies case data are tabulated for the third quarter 1986 under 4.

The last part lists the official contributors to the BULLETIN:

The geographical distribution of cases in Europe of the third quarter 1986 is shown on the maps of Europe and Turkey in the Annex.

2. RABIES IN EUROPE, THIRD QUARTER 1986

During the third quarter 1986, 3859 rabies cases were reported in Europe. There were 3057 cases in wild animals (79.2%) and 802 cases in domestic animals (20.8%). Of the cases in wild animals 2631 (68.2% of total) were foxes, 75 badgers, 105 other mustelides, 113 deer, 110 insectivorous bats and 23 others. Of the 802 domestic animals 204 were dogs (of which 146 were reported from Turkey), 150 cats, 285 cattle, 25 horses, 131 small ruminants and 7 others. These figures are summarized in Table 1.

The figures in Table 2 show accumulated totals of the first three quarters 1986 for the European countries. The overall total amounted to 12055 cases.

Rabies-free countries were: Bulgaria, Finland, United Kingdom, Ireland, Iceland, Norway, Portugal, Spain and Sweden. There were no further cases reported during this quarter from Greece. Denmark had no rabies in terrestrial animals but 97 bat-rabies cases.

No human case was reported.

Individual country reports follow:

2.1 Rabies in Austria (AUT)
by E. Scharfen

During the third quarter 1986, 297 cases of rabies were registered, 14.7% less compared to the second quarter (348) and 30% less than the 3rd quarter of the previous year (428).

Of 277 rabies cases in wild animals (93.3% of total), 224 were foxes, 23 badgers, 14 stone martens, 3 polecats, 12 roe deer, 1 stag. Of 20 rabies cases in domestic animals (6.7% of total), 8 were cattle, 6 sheep, 3 cats and a dog, a horse and a goat each.

The epizootic occured in the federal provinces (Bundesländer) Vorarlberg (Bezirke Bregenz, Dornbirn, Feldkirch), Tyrol (Imst, Schwaz, Kitzbühel), Salzburg (Zell am See, St. Johann im Pongau, Hallein), Steiermark (Liezen, Murau, Judenburg, Knittelfeld, Leoben, Voitsberg, Deutschlandsberg), Carinthia (Feldkirchen, St. Veit an der Glan, Wolfsberg), Upper Austria (Gmunden, Perg), Lower Austria (Gmünd, Waidhofen an der Thaya, Horn, Wiener Neustadt) and Burgenland (Neusiedl am See, Oberpullendorf, Güssing, Jennersdorf). The capital Vienna was rabies-free.

2.2 Rabies in Belgium (BEL)
by I. Fontaine

During the third quarter 1986, 80 cases of rabies were registered in 45 previously infected communities, all located in the provinces Liège and Luxembourg, in 36 wild animals (33 foxes, 1 badger, 1 stone marten and 1 pine marten) and 44 domestic animals (39 cattle, 2 dogs, 2 cats and 1 sheep).

The figure for the prevailing quarter represents an increase by 29% compared to the previous quarter (wild animals by 12%, domestic animals by 46%). On the other hand, when compared to the corresponding quarter of 1985 (137 cases), there is a decrease by 42% (wild animals by 45%, domestic animals by 40%). When the figures of the first and second quarter of 1986 are compared to the same period of 1985, there is an increase by 25%.

During the second half of September 1986, Belgium carried out a field trial of oral fox vaccination against rabies in an area bordering the Grand Duchy of Luxembourg comprising 1900 km^2.

2.3 Bulgaria (BUL)

The country remained rabies-free.

2.4 Rabies in Czechoslovakia (CZE)
by M. Capka and J. Neumann

In the 3rd quarter of 1986 the number of rabies affected animals was 3% higher than in the same quarter of 1985 (1985-317 cases, 1986-327 cases). The distribution of the animal species involved in 1986 was about the same as in 1985.

The disease was diagnosed in 327 cases (CSR-294, SSR-33). The fox accounted for the majority of cases (291 cases = 89% of total). Regarding the other wildlife species, rabies was diagnosed in 3 badgers, 3 martens, 1 polecat, 3 roe deer, 1 wild boar and 1 European dormouse. In regard to domestic or farm animals, rabies was ascertained in 24 animals, viz. 8 dogs, 15 cats and 1 sheep.

The disease spread to the district of Kutná Hora which has been free of rabies since January 1985.

The largest number of cases was found in the North Bohemian Region (21.1%), followed by the West Bohemian (16.8%), South Moravian (15.6%), South Bohemian (15.3%), Central Bohemian (11.3%), North Moravian (5.8%), East Slovakian (4.6%), East Bohemian (3.7%), Central Slovakian (3.1%) and West Slovakian (1.8%) Region, the Slovak capital, Bratislava (0.6%) and Praha (0.3%).

At the present time, rabies is recorded in 387 foci involving 74 districts.

No case of rabies was recorded in man.

2.5 Rabies in Germany, Democratic Republic (DDR)

During the 3rd quarter 1986, 429 cases of rabies were registered in the Democratic Republic of Germany, 130 cases more than during the previous quarter (an increase of 43.5%) and 56 cases more than during the third quarter 1985 (an increase of 15%).

The following species were affected by the disease in wild animals: the fox with 287 cases (66.9% of total), 4 badgers, 19 stone martens, 2 pine martens, 13 roe deer, 1 hare and 1 bat. 13 dogs, 27 cats, 26 cattle, 32 sheep and 4 horses were diagnosed rabid in domestic animals.

There is a high concentration of cases at the northernmost and southernmost parts of the country, the middle parts have a relative low concentration.

2.6 Rabies in Denmark (DEN)
by E. Stougaard

During the 3rd quarter of 1986 rabies was diagnosed in 97 bats. The majority of the bat-rabies cases occurred in Jutland.

Thirteen different bat species, all insectivorous bats, are known to be present in Denmark. All bat-rabies cases have been diagnosed in Eptesicus serotinus apart from two which have been recorded in Myotis daubentoni and Myotis dasycneme, respectively.

Apart from bat-rabies, the country has remained rabies-free in terrestrial animals since April 1983.

2.7 Rabies in Germany, Federal Republic (DEU)

A total of 1219 rabies cases were reported during the third quarter 1986, 129 cases more than during the previous quarter (+11.8%) and 605 cases less than during the third quarter 1985 (-33.2%).

1044 cases of the total (85.6%) were in wild animals: 888 foxes, 26 badgers, 40 stone marten, 1 pine marten, 1 racoon, 66 roe deer, 2 red deer, 6 fallow deer, 1 hedgehog, 1 house mouse and 12 bats. Of 175 cases in domestic animals were 9 dogs, 32 cats, 87 cattle, 36 sheep, 9 horses, 1 donkey and 1 pig.

For the first time in Germany, there was an accumulation of bat rabies cases in a short time interval. All 12 occurred in the northern and central part of Lower Saxony. Except for two (Myotis daubentoni and Pipistrellus nathusii), all other bats were Eptesicus serotinus. The characterisation of all bat isolates with monoclonal antibodies reveiled the Duvenhage type virus (serotype 4 of the genus Lyssavirus in the rabies group), just as the recent bat isolates from Denmark (DEN) and the one case in Poland (POL) in 1985. At this moment one must assume that the bat rabies cycle with the Duvenhage type virus is maintained independently from the European wildlife rabies in terrestrial animals, as there is no wildlife rabies in Denmark (DEN) and there are only few or no wildlife rabies cases in Germany (DEU) where bat cases occurred. Furthermore, it should be stated, the European bats are insectivorous and thus contact to terrestrial mammals is rather remote.

In regard to wildlife rabies there is one Regierungsbezirk (department) with a pronounced increase of cases (from 65 to 153): Detmold in Westphalia. All other Regierungsbezirke record less than 95 cases.

2.8 Finland (FIN)

The country remained rabies-free.

2.9 Rabies in France (FRA)
by J. Blancou

605 rabies cases were reported during the third quarter 1986, three cases more than during the previous quarter. 485 cases (80.2% of total) were registered in the fox, 21 cases in other wild animals and 99 cases in domestic animals (8 dogs, 20 cats, 26 cattle, 40 small ruminants and 5 horses). The départements (departments) with the greatest number of cases during this quarter are: Doubs (78 cases), Aube and Yonne (55 cases each).

The situation at the rabies front remained, in its entirety, stable.

2.10 Rabies in Greece (GRE)

During the third quarter 1986, no case of rabies was reported in Greece.

2.11 United Kingdom (GBR)

The country remained rabies-free.

2.12 Rabies in Hungary (HUN)
by L. Koltai

The third quarter 1986, with 240 rabies cases recorded in Hungary, shows an increase of cases by 46.3% compared to the same period in 1985 (164). Highest figures were recorded from several Komitats (departments) of Transdanubia with a hilly and forestry habitat: Fejér 28, Tolna 22, Veszprém 20 cases. A marked increase was noted in the Komitat Békés (3/85 = 5 cases; 3/86 = 20 cases). The latter Komitat is situated in the lowlands, at the eastern national border of Hungary. The reason for the drastic increase is not known.

Two points have to be considered in relation to the increase noticed from the third quarters 1985 and 1986. The one is that a worsening of the epizootic has to be expected for 1987, the second one is, the gassing of fox dens carried out in 1986 seems to have had little or no effect as method of rabies control. Therefore, new means of control have to be taken into account. In this respect the outcome of the WHO-Workshop on Oral Immunisation of Wildlife against Rabies in Europe (INTORAL) in October 1986, in Tübingen, Federal Republic of Germany, is discussed and a possible application of the method evaluated.

2.13 Iceland (ISL)

The country remained rabies-free.

2.14 Ireland (IRE)

The country remained rabies-free.

2.15 Rabies in Italy (ITA)
by S. Prosperi

During the third quarter of 1986, only 2 cases of wild animal rabies were diagnosed, one fox and one badger, both in a municipality of Trento province, namely Roncone, which was previously rabies-free but was behind the front-wave of the epizootic.

The decrease of rabies incidence may be explained, either by the seasonal variations within a year, a cyclic occurrance of possibly 3 to 5 years or by the efficacy of oral fox vaccination (carried out in the province of Brescia, Trento and Bolzano).

2.16 Rabies in Luxembourg (LUX)
by R. Frisch

There was a pronounced increase in rabies cases during the third quarter 1986. The total came to 47 cases, that is more than double the

cases of the first two quarters of 1986 together. Only the south-west part of the country was rabies-free. As usual, most of the cases were diagnosed in foxes (30 cases of total). As for the domestic animals, the cattle were affected most.

On 20 and 21 September 1986, the Grand Duchy of Luxembourg organised an oral immunisation campaign of foxes against rabies covering the whole country. The bait carrying the vaccine was placed by owners and leaseholders of hunting areas under the supervision of the veterinary and forestry departments of Luxembourg. The enthusiasm of hunters participating in the oral immunisation of foxes, and the results with this immunisation abroad, do promise that the rabies situation in wild and domestic animals of the Grand Duchy of Luxembourg may be greatly improved.

2.17 Rabies in the Netherlands (NET)

During the third quarter of 1986, the country was free of rabies.

2.18 Norway (NOR)

The country remained rabies-free.

2.19 Rabies in Poland (POL)

186 rabies cases were reported during the months of July and August 1986 for Poland. With 145 cases during the second quarter 1986, the country experienced the usual seasonal increase during the third quarter (third quarter 1985 = 349 cases).

Of the total, 149 cases (80.1%) were diagnosed in wild and 37 (19.9%) in domestic animals.

Most of the cases occur in the western half of the country with high figures in the voievodships (districts) of Opole (33 cases), Jelenia Gora and Gdansk (22 cases each), and Poznan (14 cases). All the other districts reported less than 10 cases.

The rabies cases for the month of September 1986 will be included in the annual figure for 1986 published in the next issue of the BULLETIN.

2.20 Rabies in Portugal (POR)

The country remained rabies-free.

2.21 Rabies in Romania (ROM)

There were 12 rabies cases reported in Romania during the third quarter 1986, half as many compared to the previous quarter. Of the 12 cases were 4 in foxes, 4 in cattle, 2 in horses and 2 in cats.

Only 8 provinces were affected by the disease with 1 to 3 cases each. Four of these provinces are situated in the eastern part of the country, and four in the western part.

2.22 Rabies in Spain (SPA)

The country remained rabies-free.

2.23 Sweden (SWE)

The country remained rabies-free.

2.24 Rabies in Switzerland (SWI) and Liechtenstein (LIE)

by A.I. Wandeler

During the third quarter of 1986, the Swiss Rabies Diagnostic Centre received 583 animals for examination. 33 (6%) of these were positive for rabies, compared to 23 (4% of 565) in the previous quarter and 108 (14% of 762) in the third quarter of 1985. 58% were observed in foxes, 18% in cattle. An additional 6 foxes, 1 badger and 1 stone marten were diagnosed histologically in canton Vaud. They bring the total of proven rabies cases to 41 (46 in the previous quarter).

With the exception of 4 cases all animals diagnosed rabid originate either in western canton Vaud or in the Jura Mountains in western and northwestern Switzerland, areas so far not protected by oral fox vaccination. One fox was found positive in Fürstentum Liechtenstein, close to the border of Austria, where rabies is still endemic. Two rabid foxes and 1 rabid sheep were located in canton Aargau, in an area where a rabies focus has persisted for a long period now. Oral fox vaccination campaigns were started only recently in this region.

In the third quarter of 1986 only 1 person was bitten by a proven rabid animal (stone marten). The number of people treated for non-bite exposures is not recorded.

2.25 Rabies in Turkey (TUR)

During July and August 1986, 232 rabies cases were registered in Turkey. Of these were 226 cases (97.4%) in domestic animals and only 6 in house mice. Of the domestic animals the dog shared 146 cases (62.9% of total), 18 cases were in cats, 62 cases in farm animals.

Concentration of cases was reported from the province of Izmir with 33 cases. All other provinces reported 1 to 16 cases.

The rabies cases for the month of September 1986 will be included in the annual figure for 1986 published in the next issue of this BULLETIN.

2.26 Rabies in Yugoslavia (YUG)

45 cases of rabies were reported in Yugoslavia during the third quarter 1986, half as many in comparison with the previous quarter. Of the 45 cases were 40 in foxes, and one case each in a dog, a cat, a bovine, a horse and a sheep.

Nearly all the cases are distributed in the infected northern belt of the country.

2.27 Rabies in the Union of the Soviet Socialist Republics (USSR)

Data not received before going to press.

3. MISCELLANEOUS

3.1 Epidemiological Analysis of Rabies Postexposure Vaccination in Humans in Poland with Data for 1985

by D. Seroka

The basic evidence of the protective efficacy of the rabies vaccine is the protection provided by the vaccine to persons bitten by rabid animals. The use of uniform epidemiological criteria is essential for comparative studies on the efficacy of the rabies vaccines. It provides valid data to objective and quick evaluation of which type of vaccine and which schedule of vaccination is the most appropriate. The international exchange of such detailed information is desirable.

In Poland, in every case of human postexposure rabies vaccination the following parameters are analysed:

- the animal as source of exposure,
- the rabies diagnosis of an animal: AB-rabid, C-suspected rabid, D-healthy during 10 days of observation (used as categories in the tables),
- kind of human exposure: localization and severity of wound,
- time difference between human exposure and the start of vaccination,
- irregularities in the human vaccination programme,
- post-vaccinal adverse clinical reactions.

The first three parameters may influence the length of the incubation period. For instance, rabid carnivores can cause severe wounds, and massive introduction of the virus shortens the incubation period. Therefore, it is especially important to evaluate the effect of the vaccine on patients severely bitten by rabid animals. It is different with biting animals where the presence of rabies virus is suspected (category C). Hence, the use of the total number of humans vaccinated after exposure to rabid AND rabies suspected animals can be misleading considering the efficacy of the used vaccine.

Figures on vaccination applied late after exposure or not given in adequate amounts should not be used for the evaluation of the efficacy of the vaccine.

TABLE 1 shows how vaccinated humans in Poland relate to animals as source of exposure. The main source of rabies infection is the red fox, for humans (69%) as well as for domestic animals and wild animals of the ecosystem.

In 1985 there were 2 rabies virus isolations of serotype 1 of the rabies group in rats and 1 rabies virus isolation of serotype 4 in a bat as rare instances.

Among persons vaccinated after being bitten by animals, the majority were contacts with rabid and rabies suspected dogs and cats (66.5%). The bites by foxes comprised only 15%. This is easy to explain due to the much closer relationship of man to dogs and cats compared to wild animals.

Of 1107 rabid animals in 1985 only 309 (28%) were a source of infection for 912 persons (30% of vaccinees) and 2041 persons (70%) were

vaccinated after contact with rabies suspected animals (categories C and D).

Few cases of human vaccination against rabies are due to diagnostic error or due to a patient's request without actual indication of rabies exposure.

In TABLE 2, 912 persons are analysed when exposed to AB animals. 693 (76%) were cases without wounds, only superficial contacts with saliva, which may result in a minimal risk of infection. 194 persons were bitten and of these only 16 had deep or multiple wounds. This group of 194 wounded persons can give unbiased proof of the protective efficacy of the HDC vaccine (produced by the Merieux Institute, France) used in 1985 in Poland.

Vaccinated persons were wounded three times more frequently by rabid and rabies suspected dogs and cats than by rabid wild animals.

The results of vaccination after the contact with healthy (category D) animals are not a valid proof of vaccine efficacy.

TABLE 3 shows the course of human vaccination taking into account the time of vaccine inoculation after exposure to rabies and the number of persons who were vaccinated according to proper procedures. Among 194 persons with lesions from AB animals and 1566 from C animals, only 883 were vaccinated within 3 days after exposure, 213 persons were vaccinated after more than 14 days.

As the most common irregularity in the vaccination scheme, the omission of vaccine booster doses was noticed.

In 1985 there has been no case of rabies among vaccinated persons regardless of the time distance of vaccine administration after exposure and of irregularities in the vaccination scheme. There was one human rabies case in an unvaccinated person - a 68 year old woman had been bitten in the face by an unrecognized wild animal.

The following side effects of the HDC vaccine used in Poland in 1985 were recorded:

- local redness, swelling, temperature, lymphadenopathy, head aches and muscle aches in 44 cases (1.7%)
- general allergic reaction in 4 cases (0.17%)

Conclusions

1. Heavy rabies exposure of humans from animals is fairly low. Three-fourth of human vaccinees were not wounded but had superficial contact with saliva only.
2. A high percentage of bitten persons are vaccinated because of rabies suspected domestic animals (category C).
3. The rabies vaccine (HDCV, Merieux) used in Poland is efficient and causes only negligible local and general reactions and rarely general allergic response.
4. The epidemiological significance of the bat and rat rabies cases diagnosed in 1985 need further investigation.

TABLE 1: Animals as source of rabies and human antirabies vaccination in Poland, 1985

Animals	Number of confirmed rabies cases in animals (AB)	%	Number of rabid animals (AB) as source of human exposure	%	Number of humans vaccinated after exposure to animals			Total of vaccinees	%
					AB[1]	C[2]	D[3]		
Dog	39	3,5	22	2	65	1134	204	1403	47,5
Cat	100	9	54	5	222	326	21	569	19
Fox	756	69	152	13,8	355	93	-	448	15
Racoon Dog	41	3,5	8	0,7	9	1	-	10	0,3
Badger	9	0,7	3	0,2	12	3	-	15	0,5
Marten/Polecat	21	2	13	1,1	26	27	-	53	2
Rat	2	0,2	1	0,1	1	79	-	80	3
Bat	1	0,1	1	0,1	2	-	-	2	0,06
Other Animals	138	12	55	5	220	149	4	373	12,6
Total	1107	100	309	28	912	1812	229	2953 [4]	99,96

1) Serum given in 12 cases
2) Serum given in 9 cases
3) Serum given in 25 cases
4) + 4 human rabies contacts, makes a total of 2957 vaccinees

TABLE 2: Nature of human exposure to the rabid (AB) and rabies suspected (C) animals in Poland, 1985

Kind of exposure	Numbers of humans vaccinated after exposure to											Summary	
	Dogs and cats		Farm animals		Wild carnivora		Other wild animals		Rats		Bats	AB	C
	AB	C	AB	C	AB	C	AB	C	AB	C	AB		
Indirect contact	57	37	23	1	200	36	83	19	-	-	1	364	93
Licks of the skin	83	39	39	9	153	45	54	28	-	-	-	329	121
Scratches and minor bites	129	1161	5	6	34	57	8	40	1	79	1	178	1343
Major or multiple bites	11	201	1	1	4	14	-	7	-	-	-	16	223
No data	7	22	1	-	16	5	1	5	-	-	-	25	32
Total	287	1460	69	17	407	157	146	99	1	79	2	912[1]	1812

1) 4 persons vaccinated because of human rabies contact

TABLE 3: Post-exposure measures for people exposed to rabid (AB) and rabies suspected (C) animals in Poland, 1985.

Course of human vaccination	Number of vaccinated humans				Total number vaccinated	
	With lesions		No lesions (licked or no contact)			
	AB[1]	C[2]	AB[x]	C[xx]	AB[3]	C
Total number of exposed humans	194	1566	693	214	912	1812
Number vaccinated within 3 days after exposure	70	813	105	68	175	881
Number vaccinated within 4-6 days after exposure	45	323	152	28	197	351
Number vaccinated within 7-14 days after exposure	45	215	302	83	347	298
Number vaccinated more than 14 days after exposure	31	182	115	34	116	216
No data	3	33	19	1	22	34
Number vaccinated according to proper procedures	175	1346	668	219	843	1565

1) Serum given in 12 cases
2) Serum given in 9 cases
3) 4 persons vaccinated because of human rabies contact
x) 25 cases - no information about the severity of exposure
xx) 32 cases - no information about the severity of exposure

3.2 Information on Two International Conferences on Rabies

On 9-10 October 1986, a WHO Workshop on Oral Immunization of Wildlife Against Rabies in Europe (INTORAL), with the participation of OIE took place in Tübingen, organised by the WHO Reference Centre for Rabies Surveillance and Research, at the Federal Research Institute for Animal Virus Disease, Tübingen, Federal Republic of Germany (DEU).

During the two days the following headings were dealt with:

Historical reviews on development of European fox rabies, the applied techniques for the control of wildlife rabies and the history of oral immunization.

The recent development of candidate vaccines, safety testing and possible future vaccines for oral use.

The field trial:

Organisation and specific techniques

Development of strategies

Exchange of field experience by the participating countries

The lectures were followed by a session of working groups for recommendations.

On 3-5 November 1986, an International Symposium on Research towards Rabies Prevention took place in Washington, D.C., U.S.A., organised by Fogarty International Centre, National Institute of Health.

Headings of this symposium were as follows:

History and global rabies problem

Wildlife rabies: ecology and epidemiology

Wildlife rabies: control with oral vaccines

Domestic animal rabies control

Human rabies and its prevention

Molecular biology of rabies virus

Three evening workshops dealt with the following subjects:

Transfer of technologies (information technology, epidemiology and vaccine development and control)

Rabies diagnostic techniques

The role of lesser developed nations in rabies

From both conferences published proceedings are to be expected.

3.3 Field Trial Areas of Oral Fox Vaccination against Rabies in Europe

During a WHO Workshop on Oral Immunization of Wildlife against Rabies in Europe (INTORAL), with the participation of OIE, at Tübingen (DEU), from 9-10 October 1986, the subject of oral vaccination against rabies was reviewed at length. Since 1978 when the first field trial was started in Switzerland (SWI), a machine-manufactured bait (Tübingen fox bait) in Germany (DEU) lead to the extension of the trial into large territories in 1985. Next to Switzerland and Germany (DEU) other countries started field trials (Italy, Austria, Luxembourg, Belgium, France). The participation of these countries calls for coordinating their activities, especially along the borders to protect a whole country against re-invasion once the area had become rabies-free with vaccination.

It was recommended during the WHO-Workshop that an exchange of information may be offered through this RABIES BULLETIN EUROPE to all interested parties.

Today a map is presented (ANNEX 3) summarising field trial areas where once or several times oral vaccination has been practiced.

The different countries started their vaccination campaigns as field trials in the following years:

Switzerland (SWI)	1978
Germany, Federal Republic (DEU)	1983
Italy (ITA)	1984
Austria (AUT)	1985
Luxembourg (LUX)	1986
Belgium (BEL)	1986
France (FRA)	1986

The map gives a review of the trial areas, therefore a more detailed description follows here:

SWI- nearly the whole country is covered except for parts of the Jura mountains bordering France and a small focus in Canton Aargau south of the river Aare. Areas above altitudes of 2000 meters were not vaccinated

DEU- seven federal states started trials at different times considering epidemiological development, natural and artificial barriers and financial support they could maintain: Bavaria, Hesse, Baden-Wuerttemberg, Schleswig-Holstein, Lower Saxony, Northrhine-Westfalia, Rheinland-Pfalz

ITA- the trial was started in Brescia province with the Camonica Valley; it was extended into the Subbia Valley and Alto Garda and into adjacent areas in Bolzano and Trento provinces

AUT- the whole federal province Vorarlberg

LUX- the whole country of the Grand Duchy of Luxembourg

BEL- 1900 km^2 adjacent to Luxembourg

FRA- 700 km^2 adjacent to Luxembourg

Information on the oral vaccination campaigns can also be found under the specific report of the individual countries under 2 of this BULLETIN.

TABLE 1

EUR EUROPE 3/86 RABIES CASES 1. 7.86 - 30. 9.86

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
AUT	AUSTRIA	1	3	8	1	7	-	20	224	23	17	13	-	277		297
BEL	BELGIUM	2	2	39	-	1	-	44	33	1	2	-	-	36		80
BUL	BULGARIA *							0						0		0
CZE	CZECHOSLOVAKIA	8	15	-	-	1	-	24	291	3	4	3	2	303		327
DDR	GERMAN DEM. REPUBLIC	13	27	26	4	32	-	102	287	4	21	13	2	327		429
DEN	DENMARK							0	-	-	-	-	97	97		97
DEU	FED.REP. OF GERMANY	9	32	87	9	36	2	175	888	26	41	74	15	1044		1219
FIN	FINLAND *							0						0		0
FRA	FRANCE	8	20	26	5	40	-	99	485	6	10	4	1	506		605
GBR	UNITED KINGDOM *							0						0		0
GRE	GREECE *							0						0		0
HUN	HUNGARY	7	18	9	-	1	-	35	203	-	1	1	-	205		240
IRE	IRELAND *							0						0		0
ISL	ICELAND *							0						0		0
ITA	ITALY							0	1	1	-	-	-	2		2
LUX	LUXEMBOURG	-	1	13	1	1	1	17	27	1	-	-	2	30		47
NET	NETHERLANDS *							0						0		0
NOR	NORWAY *							0						0		0
POL	POLAND **	9	9	17	-	1	1	37	123	6	7	5	8	149		186
POR	PORTUGAL *							0						0		0
ROM	ROMANIA	-	2	4	2	-	-	8	4	-	-	-	-	4		12
SPA	SPAIN *							0						0		0
SWE	SWEDEN *							0						0		0
SWI	SWITZERLAND + LIECHT	-	2	6	-	2	-	10	25	4	2	-	-	31		41
TUR	TURKEY **	146	18	49	2	8	3	226	-	-	-	-	6	6		232
YUG	YUGOSLAVIA	1	1	1	1	1	-	5	40	-	-	-	-	40		45
TOTAL		204	150	285	25	131	7	802	2631	75	105	113	133	3057	0	3859
PER CENT		5.3	3.9	7.4	0.6	3.4	0.2	20.8	68.2	1.9	2.7	2.9	3.4	79.2	0.0	100.0

* NO CASES, ** NO DATA FOR SEPTEMBER.

TABLE 2: ACCUMULATED TOTALS OF RABIES CASES FOR THE PERIOD 1. JANUARY - 30. SEPTEMBER 1986.

EUR EUROPE 1-3/86 RABIES CASES 1. 1.86 - 30. 9.86

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
AUT	AUSTRIA	2	14	14	3	7	-	40	837	65	30	40	-	972		1012
BEL	BELGIUM	9	11	72	1	19	-	112	134	5	5	2	-	146		258
BUL	BULGARIA *							0						0		0
CZE	CZECHOSLOVAKIA	33	33	2	-	3	-	71	922	7	22	14	7	972		1043
DDR	GERMAN DEM. REPUBLIC	46	66	44	5	55	2	218	752	11	47	40	6	856		1074
DEN	DENMARK							0	-	-	-	-	100	100		100
DEU	FED.REP. OF GERMANY	38	110	184	27	134	4	497	2831	99	106	237	22	3295	1	3793
FIN	FINLAND *							0						0		0
FRA	FRANCE	44	74	54	14	107	2	295	1533	15	32	18	2	1600		1895
GBR	UNITED KINGDOM *							0						0		0
GRE	GREECE *							0						0		0
HUN	HUNGARY	37	45	24	-	1	2	109	650	-	2	17	2	671		780
IRE	IRELAND *							0						0		0
ISL	ICELAND *							0						0		0
ITA	ITALY	1	-	-	-	-	-	1	23	4	-	1	-	28		29
LUX	LUXEMBOURG	-	2	14	1	1	1	19	44	4	1	-	2	51		70
NET	NETHERLANDS *							0						0		0
NOR	NORWAY *							0						0		0
POL	POLAND **	33	48	26	-	2	3	112	378	8	13	26	21	446		558
POR	PORTUGAL *							0						0		0
ROM	ROMANIA	4	6	9	2	5	-	26	33	2	-	-	-	35		61
SPA	SPAIN *							0						0		0
SWE	SWEDEN *							0						0		0
SWI	SWITZERLAND + LIECHT	1	10	7	-	4	-	22	110	10	16	4	1	141		163
TUR	TURKEY **	586	48	135	6	36	12	823	3	-	-	-	25	28		851
YUG	YUGOSLAVIA	9	6	2	1	2	2	22	340	2	-	1	3	346		368
TOTAL		843	473	587	60	376	28	2367	8590	232	274	400	191	9687	1	12055
PER CENT		7.0	3.9	4.9	0.5	3.1	0.2	19.6	71.3	1.9	2.3	3.3	1.6	80.4	0.0	100.0

* NO CASES, ** NO DATA FOR SEPTEMBER.

TABLE 3

EUR EUROPE 3/86 RABIES CASES 'OTHER ANIMAL SPECIES' 1. 7.86 - 30. 9.86

LOCATION CODE	NAME	OTHER DOMESTIC ANIMALS					OTHER WILD ANIMALS									TOTAL
		OTH.DOM CARNIV.	DONKEY	PIG	OTH.DOM HERBIV.	OTHER	RACOON DOG	WILD CAT	RACOON	WILD BOAR	HEDGE HOG	INSECT. BAT	DOR-MOUSE	HOUSE MOUSE	HARE	OTHER	
CZE	CZECHOSLOVAKIA	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	2
DDR	GERMAN DEM. REPUBLIC	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	2
DEN	DENMARK	-	-	-	-	-	-	-	-	-	-	97	-	-	-	-	97
DEU	FED.REP. OF GERMANY	-	1	1	-	-	-	-	1	-	1	12	-	1	-	-	17
FRA	FRANCE	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
LUX	LUXEMBOURG	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2	3
POL	POLAND **	1	-	-	-	-	7	-	-	-	-	-	-	-	1	-	9
TUR	TURKEY **	-	2	-	1	-	-	-	-	-	-	-	-	6	-	-	9
TOTAL		1	3	1	1	1	7	1	1	1	1	110	1	7	2	2	140
PER CENT		0.7	2.1	0.7	0.7	0.7	5.0	0.7	0.7	0.7	0.7	78.6	0.7	5.0	1.4	1.4	100.0

** NO DATA FOR SEPTEMBER.

AUT AUSTRIA — RABIES CASES — 1. 7.86 - 30. 9.86

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
104	GUESSING							0	1	-	-	-	-	1		1
105	JENNERSDORF							0	1	-	-	-	-	1		1
107	NEUSIEDL AM SEE							0	3	-	-	-	-	3		3
108	OBERPULLENDORF							0	1	-	-	-	-	1		1
205	SANKT VEIT AN DER GL	-	-	-	-	1	-	1	8	-	-	-	-	8		9
206	SPITTAL AN DER DRAU							0	1	-	-	-	-	1		1
209	WOLFSBERG							0	8	-	1	-	-	9		9
210	FELDKIRCHEN							0	7	1	-	-	-	8		8
309	GMUEND							0	9	-	-	-	-	9		9
311	HORN							0	5	-	-	-	-	5		5
316	MISTELBACH							0	1	-	-	-	-	1		1
322	WAIDHOFEN AN DER THA							0	6	-	1	1	-	8		8
323	WIENER NEUSTADT-LAND							0	4	-	1	-	-	5		5
407	GMUNDEN							0	7	1	-	-	-	8		8
411	PERG							0	3	-	-	-	-	3		3
413	ROHRBACH							0	1	-	-	-	-	1		1
502	HALLEIN	1	-	1	-	-	-	2	16	-	3	-	-	19		21
504	SANKT JOHANN IM PONG	-	-	2	-	-	-	2	7	3	-	-	-	10		12
506	ZELL AM SEE	-	-	2	-	5	-	7	29	3	-	1	-	33		40
603	DEUTSCHLANDSBERG	-	2	-	-	-	-	2	6	-	-	-	-	6		8
606	GRAZ-LAND							0	-	1	-	-	-	1		1
608	JUDENBURG							0	4	1	1	-	-	6		6
609	KNITTELFELD	-	-	1	-	-	-	1	34	1	2	7	-	44		45
611	LEOBEN							0	2	1	-	-	-	3		3
612	LIEZEN	-	-	-	1	1	-	2	27	5	1	4	-	37		39
614	MURAU							0	2	1	1	-	-	4		4
616	VOITSBERG	-	-	1	-	-	-	1	25	3	4	-	-	32		33
704	KITZBUEHEL							0	2	-	-	-	-	2		2
708	REUTTE							0	2	-	-	-	-	2		2
709	SCHWAZ							0	-	-	1	-	-	1		1
802	BREGENZ	-	1	1	-	-	-	2	1	-	-	-	-	1		3
803	DORNBIRN							0	1	1	1	-	-	3		3
804	FELDKIRCH							0	-	1	-	-	-	1		1
TOTAL		1	3	8	1	7	0	20	224	23	17	13	0	277	0	297
PER CENT		0.3	1.0	2.7	0.3	2.4	0.0	6.7	75.4	7.7	5.7	4.4	0.0	93.3	0.0	100.0

RABIES CASES 1. 7.86 - 30. 9.86

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
BEL	**BELGIUM**															
LG	LIEGE	1	-	28	-	-	-	29	13	1	1	-	-	15		44
LX	LUXEMBOURG	1	2	11	-	1	-	15	20	-	1	-	-	21		36
TOTAL		2	2	39	0	1	0	44	33	1	2	0	0	36	0	80
PER CENT		2.5	2.5	48.8	0.0	1.2	0.0	55.0	41.3	1.2	2.5	0.0	0.0	45.0	0.0	100.0
DEN	**DENMARK**															
025	ROSKILDE							0	-	-	-	-	1	1		1
035	STORSTROM							0	-	-	-	-	3	3		3
042	FYN							0	-	-	-	-	1	1		1
050	SONDERJYLLAND							0	-	-	-	-	8	8		8
055	RIBE							0	-	-	-	-	45	45		45
060	VEJLE							0	-	-	-	-	9	9		9
065	RINGKOBING							0	-	-	-	-	3	3		3
070	ARHUS							0	-	-	-	-	19	19		19
076	VIBORG							0	-	-	-	-	5	5		5
080	NORDJYLLAND							0	-	-	-	-	3	3		3
TOTAL		0	0	0	0	0	0	0	0	0	0	0	97	97	0	97
LUX	**LUXEMBOURG**															
00	LUXEMBOURG-VILLE							0	1	-	-	-	-	1		1
02	CAPELLEN							0	2	-	-	-	-	2		2
04	LUXEMBOURG-CAMPAGNE	-	-	1	1	-	1	3	5	-	-	-	-	5		8
05	MERSCH	-	-	3	-	-	-	3	5	-	-	-	-	5		8
06	CLERVAUX							0	1	-	-	-	1	2		2
07	DIEKIRCH	-	1	2	-	-	-	3	7	-	-	-	-	7		10
09	WILTZ	-	-	1	-	-	-	1	2	-	-	-	-	2		3
11	ECHTERNACH	-	-	3	-	-	-	3	1	-	-	-	1	2		5
12	GREVENMACHER	-	-	3	-	1	-	4	1	1	-	-	-	2		6
13	REMICH							0	2	-	-	-	-	2		2
TOTAL		0	1	13	1	1	1	17	27	1	0	0	2	30	0	47
PER CENT		0.0	2.1	27.7	2.1	2.1	2.1	36.2	57.4	2.1	0.0	0.0	4.3	63.8	0.0	100.0

CZE C Z E C H O S L O V A K I A R A B I E S C A S E S 1. 7.86 - 30. 9.86

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
00	DISTRICT OF PRAGUE							0	1	-	-	-	-	1		1
01	CENTRAL BOHEMIA	3	3	-	-	-	-	6	29	-	-	1	1	31		37
02	SOUTH BOHEMIA	1	4	-	-	-	-	5	43	-	1	1	-	45		50
03	WEST BOHEMIA							0	53	2	-	-	-	55		55
04	NORTH BOHEMIA	1	1	-	-	-	-	2	64	1	2	-	-	67		69
05	EAST BOHEMIA							0	12	-	-	-	-	12		12
06	SOUTH MORAVIA	-	3	-	-	1	-	4	47	-	-	-	-	47		51
07	NORTH MORAVIA	-	1	-	-	-	-	1	17	-	-	1	-	18		19
0	CSR	5	12	-	-	1	-	18	266	3	3	3	1	276		294
10	DISTRICT OF BRATISLAV							0	2	-	-	-	-	2		2
11	WEST SLOVAKIA	-	2	-	-	-	-	2	2	-	1	-	1	4		6
12	CENTRAL SLOVAKIA	2	1	-	-	-	-	3	7	-	-	-	-	7		10
13	EAST SLOVAKIA	1	-	-	-	-	-	1	14	-	-	-	-	14		15
1	SSR	3	3	-	-	-	-	6	25	-	1	-	1	27		33
TOTAL		8	15	0	0	1	0	24	291	3	4	3	2	303	0	327
PER CENT		2.4	4.6	0.0	0.0	0.3	0.0	7.3	89.0	0.9	1.2	0.9	0.6	92.7	0.0	100.0

DDR GERMAN DEMOCRATIC REPUBLIC — RABIES CASES — 1. 7.86 - 30. 9.86

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
01	HAUPTSTADT BERLIN							0						0		0
02	COTTBUS	2	1	-	-	1	-	4	15	-	1	-	-	16		20
03	DRESDEN	-	-	-	-	1	-	1	3	-	-	-	-	3		4
04	ERFURT	-	1	7	-	3	-	11	35	-	3	-	-	38		49
05	FRANKFURT/ODER	-	1	-	-	-	-	1	27	1	1	1	-	30		31
06	GERA	1	3	-	-	2	-	6	40	1	2	3	-	46		52
07	HALLE	3	2	-	-	-	-	5	19	-	-	1	1	21		26
08	KARL-MARX-STADT	1	4	1	-	16	-	22	13	-	2	-	-	15		37
09	LEIPZIG	-	3	1	-	6	-	10	14	-	-	4	-	18		28
10	MAGDEBURG	2	1	-	2	-	-	5	15	-	-	-	-	15		20
11	NEUBRANDENBURG	3	3	4	-	1	-	11	19	1	5	-	1	26		37
12	POTSDAM							0	2	-	-	-	-	2		2
13	ROSTOCK	1	6	12	2	1	-	22	50	-	4	2	-	56		78
14	SCHWERIN	-	2	1	-	-	-	3	17	1	2	-	-	20		23
15	SUHL	-	-	-	-	1	-	1	18	-	1	2	-	21		22
TOTAL		13	27	26	4	32	0	102	287	4	21	13	2	327	0	429
PER CENT		3.0	6.3	6.1	0.9	7.5	0.0	23.8	66.9	0.9	4.9	3.0	0.5	76.2	0.0	100.0

DEU FEDERAL REPUBLIC OF GERMANY — RABIES CASES — 1. 7.86 - 30. 9.86

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
010	SCHLESWIG-HOLSTEIN							0						0		0
020	HAMBURG							0						0		0
031	BRAUNSCHWEIG	-	1	9	1	8	-	19	28	1	-	4	1	34		53
032	HANNOVER	-	3	5	-	6	-	14	24	1	3	3	5	36		50
033	LUENEBURG	-	1	-	1	-	-	2	7	-	-	1	7	15		17
034	WESER-EMS							0						0		0
040	BREMEN							0						0		0
051	DUESSELDORF							0	2	-	-	-	-	2		2
053	KOELN	-	2	25	2	2	-	31	47	-	1	1	-	49		80
055	MUENSTER							0						0		0
057	DETMOLD	1	5	19	1	3	1	30	102	1	3	16	1	123		153
059	ARNSBERG	-	-	5	-	6	-	11	52	2	3	8	-	65		76
061	DARMSTADT	2	2	2	1	-	-	7	59	1	6	10	-	76		83
062	KASSEL	-	3	10	1	9	-	23	57	8	1	4	1	71		94
071	KOBLENZ	-	2	1	-	-	-	3	32	1	1	-	-	34		37
072	TRIER	1	1	4	-	1	-	7	26	-	-	1	-	27		34
073	RHEINHESSEN-PFALZ	1	2	1	-	-	-	4	15	-	4	4	-	23		27
081	STUTTGART	-	1	2	-	-	-	3	31	-	1	-	-	32		35
082	KARLSRUHE	-	-	1	1	-	-	2	28	1	1	6	-	36		38
083	FREIBURG	1	2	1	-	-	-	4	73	1	5	4	-	83		87
084	TUEBINGEN	1	1	-	-	-	-	2	47	3	1	3	-	54		56
091	OBERBAYERN	-	1	-	-	-	-	1	49	1	-	-	-	50		51
092	NIEDERBAYERN							0	8	-	-	-	-	8		8
093	OBERPFALZ	-	2	-	-	-	1	3	59	1	1	3	-	64		67
094	OBERFRANKEN	-	1	-	1	-	-	2	50	1	-	1	-	52		54
095	MITTELFRANKEN	-	1	-	-	1	-	2	18	-	2	-	-	20		22
096	UNTERFRANKEN	2	-	-	-	-	-	2	39	1	3	3	-	46		48
097	SCHWABEN	-	1	1	-	-	-	2	21	2	1	-	-	24		26
100	SAARLAND	-	-	1	-	-	-	1	14	-	4	2	-	20		21
110	BERLIN (WEST)							0						0		0
TOTAL		9	32	87	9	36	2	175	888	26	41	74	15	1044	0	1219
PER CENT		0.7	2.6	7.1	0.7	3.0	0.2	14.4	72.8	2.1	3.4	6.1	1.2	85.6	0.0	100.0

FRA F R A N C E — R A B I E S C A S E S — 1. 7.86 - 30. 9.86

LOCATION CODE NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
01 AIN							0	1	-	-	-	-	1		1
02 AISNE	-	2	-	-	1	-	3	21	-	2	1	-	24		27
08 ARDENNES	-	1	3	-	1	-	5	2	-	1	-	-	3		8
10 AUBE							0	54	-	1	-	-	55		55
21 COTE D'OR	-	1	1	-	-	-	2	6	-	-	-	-	6		8
25 DOUBS	2	-	2	-	3	-	7	67	3	1	-	-	71		78
39 JURA	-	-	1	-	-	-	1	21	2	-	-	-	23		24
51 MARNE	-	1	-	-	-	-	1	6	-	-	-	-	6		7
52 MARNE (HAUTE)	-	1	1	1	2	-	5	15	-	1	-	-	16		21
54 MEURTHE-ET-MOSELLE	-	5	8	-	2	-	15	27	-	-	-	-	27		42
55 MEUSE	1	2	3	-	4	-	10	23	-	1	-	-	24		34
57 MOSELLE	-	-	-	-	1	-	1	14	-	-	-	1	15		16
58 NIEVRE	-	-	1	-	1	-	2	19	-	-	-	-	19		21
60 OISE	2	1	-	-	-	-	3	23	-	-	-	-	23		26
67 RHIN (BAS)	1	-	-	-	-	-	1	5	-	-	1	-	6		7
68 RHIN (HAUT)	2	-	-	2	-	-	4	33	1	1	2	-	37		41
70 SAONE (HAUTE)	-	-	4	1	2	-	7	24	-	-	-	-	24		31
73 SAVOIE							0	1	-	-	-	-	1		1
74 SAVOIE (HAUTE)	-	1	-	-	-	-	1	3	-	-	-	-	3		4
77 SEINE-ET-MARNE	-	-	-	1	-	-	1	13	-	-	-	-	13		14
80 SOMME							0	3	-	-	-	-	3		3
88 VOSGES	-	3	1	-	10	-	14	31	-	-	-	-	31		45
89 YONNE	-	1	1	-	12	-	14	40	-	1	-	-	41		55
90 TERR.DE BELFORT							0	4	-	-	-	-	4		4
91 ESSONNE	-	-	-	-	1	-	1	27	-	-	-	-	27		28
94 VAL DE MARNE	-	1	-	-	-	-	1	1	-	1	-	-	2		3
95 VAL D'OISE							0	1	-	-	-	-	1		1
TOTAL	8	20	26	5	40	0	99	485	6	10	4	1	506	0	605
PER CENT	1.3	3.3	4.3	0.8	6.6	0.0	16.4	80.2	1.0	1.7	0.7	0.2	83.6	0.0	100.0

RABIES CASES 1. 7.86 - 30. 9.86

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
HUN	HUNGARY															
01	BUDAPEST							0	1	-	-	1	-	2		2
02	BARANYA	-	2	-	-	-	-	2	8	-	-	-	-	8		10
03	BACS-KISKUN	-	2	-	-	-	-	2	5	-	-	-	-	5		7
04	BEKES							0	20	-	-	-	-	20		20
05	BORSOD-ABAUJ-ZEMPLEN	-	2	1	-	-	-	3	9	-	-	-	-	9		12
06	CSONGRAD	-	1	-	-	1	-	2	2	-	-	-	-	2		4
07	FEJER	1	-	-	-	-	-	1	27	-	-	-	-	27		28
08	GYOER-SOPRON	-	1	-	-	-	-	1	4	-	-	-	-	4		5
09	HAJDU-BIHAR	2	-	1	-	-	-	3	2	-	-	-	-	2		5
10	HEVES	-	1	-	-	-	-	1	5	-	-	-	-	5		6
11	KOMAROM	-	1	-	-	-	-	1	17	-	-	-	-	17		18
12	NOGRAD							0	4	-	-	-	-	4		4
13	PEST	1	-	-	-	-	-	1	14	-	-	-	-	14		15
14	SOMOGY	-	1	1	-	-	-	2	16	-	-	-	-	16		18
15	SZABOLCS-SZATMAR	1	1	3	-	-	-	5	13	-	-	-	-	13		18
16	SZOLNOK							0	1	-	-	-	-	1		1
17	TOLNA	1	5	3	-	-	-	9	13	-	-	-	-	13		22
18	VAS	-	1	-	-	-	-	1	14	-	1	-	-	15		16
19	VESZPREM							0	20	-	-	-	-	20		20
20	ZALA	1	-	-	-	-	-	1	8	-	-	-	-	8		9
TOTAL		7	18	9	0	1	0	35	203	0	1	1	0	205	0	240
PER CENT		2.9	7.5	3.8	0.0	0.4	0.0	14.6	84.6	0.0	0.4	0.4	0.0	85.4	0.0	100.0
ITA	ITALY															
38	TRENTO							0	1	1	-	-	-	2		2

POL POLAND — RABIES CASES — 1. 7.86 - 31. 8.86

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
05	BIALYSTOK	-	-	1	-	-	-	1	1	-	-	-	-	1		2
07	BIELSKO-BIALA	-	3	-	-	-	-	3	-	-	-	1	-	1		4
09	BYDGOSZCZ							0	4	1	1	-	-	6		6
17	ELBLAG	-	-	1	-	-	-	1	1	-	2	-	1	4		5
19	GDANSK	-	1	4	-	1	-	6	13	-	1	-	2	16		22
21	GORZOW	-	1	-	-	-	-	1	2	-	-	-	-	2		3
23	JELENIA GORA	-	2	-	-	-	-	2	20	-	-	-	-	20		22
27	KATOWICE							0	1	-	1	-	-	2		2
33	KOSZALIN	-	-	1	-	-	-	1	4	-	-	-	-	4		5
37	KROSNO							0	1	-	-	-	-	1		1
39	LEGNICA	1	-	1	-	-	-	2	2	-	-	-	-	2		4
41	LESZNO	2	-	-	-	-	-	2	2	-	-	-	-	2		4
43	LUBLIN							0	-	-	-	-	1	1		1
51	OLSZTYN	-	-	1	-	-	-	1	-	-	-	1	2	3		4
53	OPOLE	1	-	-	-	-	-	1	32	-	-	-	-	32		33
57	PILA							0	3	-	-	-	-	3		3
61	PLOCK							0	2	-	-	-	-	2		2
63	POZNAN	-	-	1	-	-	-	1	12	-	1	-	-	13		14
65	PRZEMYSL	-	-	-	-	-	1	1						0		1
67	RADOM							0	1	1	-	-	-	2		2
77	SLUPSK	1	-	-	-	-	-	1	2	-	-	-	-	2		3
79	SUWALKI	-	-	5	-	-	-	5	-	-	-	-	2	2		7
81	SZCZECIN	2	1	-	-	-	-	3	4	-	1	1	-	6		9
87	TORUN							0	1	-	-	-	-	1		1
89	WALBRZYCH	-	1	-	-	-	-	1	6	-	-	-	-	6		7
91	WLOCLAWEK	1	-	-	-	-	-	1						0		1
93	WROCLAW	1	-	1	-	-	-	2	1	3	-	1	-	5		7
95	ZAMOSC							0	1	-	-	1	-	2		2
97	ZIELONA GORA	-	-	1	-	-	-	1	7	1	-	-	-	8		9
TOTAL		9	9	17	0	1	1	37	123	6	7	5	8	149	0	186
PER CENT		4.8	4.8	9.1	0.0	0.5	0.5	19.9	66.1	3.2	3.8	2.7	4.3	80.1	0.0	100.0

DATA FOR SEPTEMBER NOT YET RECEIVED.

TUR TURKEY

RABIES CASES

1. 7.86 - 31. 8.86

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
001	ADANA	4	2	-	-	-	-	6						0		6
003	AFYON	1	-	-	-	-	-	1						0		1
004	AGRI	2	-	-	-	-	-	2						0		2
005	AMASYA	2	1	-	-	-	-	3						0		3
006	ANKARA	4	-	1	-	-	-	5						0		5
007	ANTALYA	2	1	-	-	-	-	3						0		3
009	AYDIN	4	-	2	-	-	-	6						0		6
010	BALIKESIR	1	-	1	1	4	-	7						0		7
011	BILECIK	-	-	1	-	-	-	1						0		1
014	BOLU	3	-	2	-	-	-	5						0		5
016	BURSA	2	-	-	-	-	-	2						0		2
019	CORUM	1	-	-	-	1	-	2						0		2
020	DENIZLI	3	-	-	-	-	-	3						0		3
021	DIYARBAKIR	-	1	-	-	-	-	1						0		1
023	ELAZIG	2	2	-	-	-	1	5						0		5
024	ERZINCAN	1	-	-	-	-	-	1						0		1
025	ERZURUM	1	1	-	-	-	-	2						0		2
026	ESKISEHIR	1	-	-	-	-	-	1						0		1
027	GAZIANTEP	2	-	2	-	1	-	5	-	-	-	-	3	3		8
028	GIRESUN	1	-	1	-	-	-	2						0		2
031	HATAY	1	1	-	-	-	-	2						0		2
032	ISPARTA	-	-	1	-	-	-	1						0		1
033	ICEL	3	-	-	-	-	1	4						0		4
034	ISTANBUL	8	1	-	-	-	-	9						0		9
035	IZMIR	21	7	4	-	-	-	32	-	-	-	-	1	1		33

TUR CONTINUED

LOCATION CODE	NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
		DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
037	KASTAMONU	2	-	-	1	-	-	3						0		3
038	KAYSERI	7	-	8	-	-	1	16						0		16
040	KIRSEHIR	1	-	-	-	-	-	1						0		1
041	KOCAELI	5	-	2	-	-	-	7						0		7
042	KONYA	6	-	-	-	-	-	6						0		6
043	KUETAHYA	3	-	-	-	-	-	3						0		3
044	MALATYA	1	-	-	-	-	-	1						0		1
045	MANISA	5	-	1	-	1	-	7						0		7
046	KAHRAMAN MARAS	2	-	1	-	1	-	4						0		4
047	MARDIN	2	-	-	-	-	-	2						0		2
048	MUGLA	-	1	-	-	-	-	1						0		1
052	ORDU	7	-	1	-	-	-	8	-	-	-	-	1	1		9
054	SAKARYA	7	-	1	-	-	-	8						0		8
055	SAMSUN	5	-	5	-	-	-	10	-	-	-	-	1	1		11
057	SINOP	1	-	3	-	-	-	4						0		4
058	SIVAS	2	-	1	-	-	-	3						0		3
060	TOKAT	2	-	-	-	-	-	2						0		2
061	TRABZON	2	-	4	-	-	-	6						0		6
064	USAK	2	-	2	-	-	-	4						0		4
066	YOZGAT	8	-	3	-	-	-	11						0		11
067	ZONGULDAK	6	-	2	-	-	-	8						0		8
TOTAL		146	18	49	2	8	3	226	0	0	0	0	6	6	0	232
PER CENT		62.9	7.8	21.1	0.9	3.4	1.3	97.4	0.0	0.0	0.0	0.0	2.6	2.6	0.0	100.0

DATA FOR SEPTEMBER NOT YET RECEIVED.

RABIES CASES 1. 7.86 - 30. 9.86

LOCATION CODE NAME	DOMESTIC ANIMALS							WILD ANIMALS						HUMAN CASES	TOTAL
	DOG	CAT	CATTLE	HORSE	SHEEP GOAT	OTHERS	TOTAL	FOX	BADGER	OTHER MUSTEL	DEER	OTHERS	TOTAL		
ROM ROMANIA															
04 BACAU	-	-	-	1	-	-	1	2	-	-	-	-	2		3
06 BISTRITA-NASAUD	-	1	-	-	-	-	1						0		1
16 DIMBOVITA	-	-	-	1	-	-	1						0		1
20 GORJ	-	-	2	-	-	-	2	1	-	-	-	-	1		3
25 MARAMURES	-	-	1	-	-	-	1						0		1
28 NEAMT							0	1	-	-	-	-	1		1
32 SALAJ	-	1	-	-	-	-	1						0		1
38 VASLUI	-	-	1	-	-	-	1						0		1
TOTAL	0	2	4	2	0	0	8	4	0	0	0	0	4	0	12
PER CENT	0.0	16.7	33.3	16.7	0.0	0.0	66.7	33.3	0.0	0.0	0.0	0.0	33.3	0.0	100.0
SWI SWITZERLAND AND LIECHTENSTEIN															
01 AARGAU							0	3	-	-	-	-	3		3
12 NEUCHATEL	-	-	3	-	1	-	4	8	-	-	-	-	8		12
22 VAUD	-	2	3	-	-	-	5	8	3	2	-	-	13		18
26 JURA	-	-	-	-	1	-	1	5	1	-	-	-	6		7
LI LIECHTENSTEIN							0	1	-	-	-	-	1		1
TOTAL	0	2	6	0	2	0	10	25	4	2	0	0	31	0	41
PER CENT	0.0	4.9	14.6	0.0	4.9	0.0	24.4	61.0	9.8	4.9	0.0	0.0	75.6	0.0	100.0
YUG YUGOSLAVIA															
10 SR BOSNA I HERCEGOVIN							0	2	-	-	-	-	2		2
30 SR HRVATSKA	1	1	-	-	1	-	3	17	-	-	-	-	17		20
50 SR SLOVENIJA							0	13	-	-	-	-	13		13
61 SAP VOJVODINA	-	-	1	1	-	-	2	8	-	-	-	-	8		10
TOTAL	1	1	1	1	1	0	5	40	0	0	0	0	40	0	45
PER CENT	2.2	2.2	2.2	2.2	2.2	0.0	11.1	88.9	0.0	0.0	0.0	0.0	88.9	0.0	100.0

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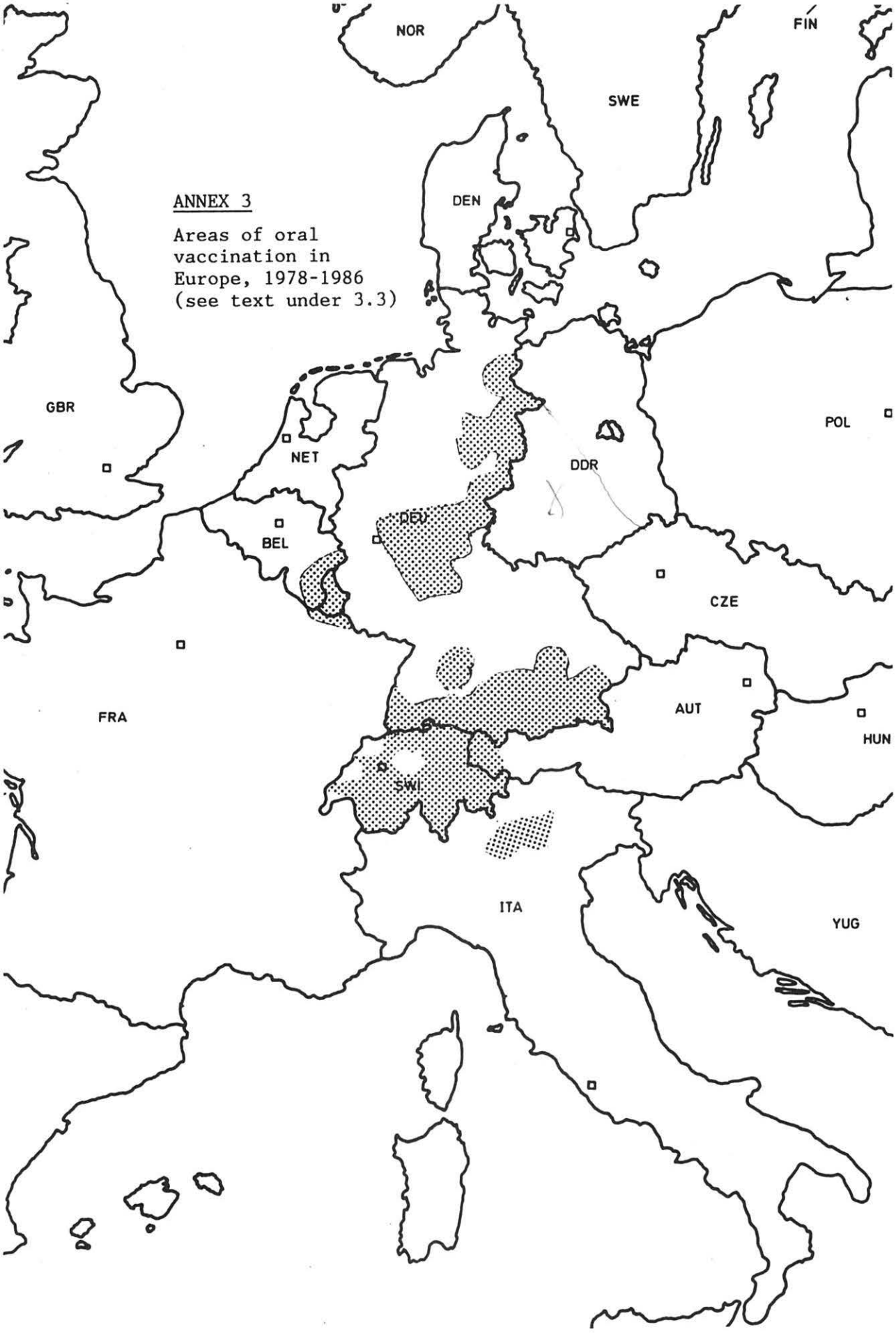
ANNEX 3
Areas of oral vaccination in Europe, 1978-1986 (see text under 3.3)
NOR
FIN
SWE
DEN
GBR
NET
POL
DDR
BEL
DEU
CZE
FRA
AUT
HUN
SWI
ITA
YUG

WHO Coll. Centre
Tuebingen / DEU

Rabies Cases Turkey
3 rd Quarter 1986
232 cases reported
(no data for September)

WHO Coll. Centre
Tuebingen / DEU

Rabies Cases Europe
3rd Quarter 1986

3859 cases reported

• bat rabies

ISL
(rabies free)

NOR
(rabies free)

FIN
(0)

SWE
(rabies free)

(97)
DEN

IRE
(rabies free)

GBR
(rabies free)

USR
(no data)

(429)
DDR

POL
(186)
(no data for September)

NET
(0)

BEL
(80)

DEU
(1219)

(327)
CZE

(297)
AUT

HUN.
(240)

FRA
(605)

(41)
SWI

ROM
(12)

ITA
(2)

YUG
(45)

BUL
(rabies free)

POR
(rabies free)

SPA
(rabies free)

ALB
(no data)

(no data for September)
TUR
(232)

GRE
(0)

0 50 100 km