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REPORT ON THE
**TASK FORCE MEETING
OF THE
“RABIES”
SUB-GROUP**

**POZNAN, Poland
6-7 April 2006**

**REPORT OF THE MEETING OF THE RABIES SUB-GROUP OF THE TASK FORCE ON
MONITORING ANIMAL DISEASE ERADICATION HELD IN POZNAN, POLAND, ON 6-7**

APRIL 2006

Participants:

- Vilmos Pálfi (HU - Chairman),
- Members of the Rabies Sub-group: Jedrt Maurer Wernig (SI), Enel Niin (EE), Josef Vitásek (CZ), Florence Cliquet (FR) and Thomas Müller (DE)
- F. Reviriego (COM)

Agenda: see Annex 1

Location: Poznan, Poland

DAY 1

In the morning participants visited the Wielkopolski Aeroclub. This aeroclub is in 2006 spring campaign responsible for vaccine baits distribution only in the region of Wielkopolska (tender winner). The vaccine is stored in cooling truck during the whole period of campaign, where the temperature is registered and printed out every day. At arrival vaccine baits are checked and samples taken from some batches delivered are being sent for virus titration test to National Reference Laboratory (NRL).

Lecture was given on vaccine baits distribution; however practical show was cancelled due to the unfavourable weather conditions.

Depending on the weather conditions one campaign takes 7-14 days. During the vaccine distribution campaign 3-5 aeroplanes fly every day. One flight takes 6 hours and two trained persons distribute the baits manually. The distance between the flights at present is 1 km, and in general according to national legislation at least 20 baits/km² shall be distributed. Planes are equipped with the GPS system for registration of flights and documentation of the routes of the aeroplanes but not with a vaccine bait launching positioning system. In the regions of cities and lakes the vaccine baits distribution is not performed and these areas are not covered by manual distribution also.

In the afternoon the meeting was continued in the Regional Veterinary Inspectorate in Poznan. The Regional Veterinary Officer in Poznan welcomed all the participants and officially opened the meeting.

The first speaker was Magdalena Zietara from the Animal Health and Welfare Office of the General Veterinary Inspectorate, who gave lecture on the situation of rabies in Poland and neighbouring countries.

The main parts of the presentation were as follows:

1. Scope of vaccination since 1993.

Rabies vaccination in Poland started in 1993 in the Western part of the country along the German and Czech border. Vaccinated area was continuously extended to the East, each year new regions were included, in 1996 three, and in 1997 two new regions were covered by the programme. Between 1998 and 2001 only small part of the territory was not covered. In 2001 a huge peak of rabies incidence occurred, therefore since 2002 the whole country has been covered by vaccinations. Preventive

vaccinations of foxes are carried out twice a year, mostly by plane distribution of the vaccine. At present two vaccine are being used: Lypulven (SAD Bern) and Fuchsoral (SAD B19).

2. Rabies incidence in Poland between 1993 and 2001.

In spite of the vaccination of foxes in this period, rabies incidence did not decrease to the accepted level. In Table 1 the incidence of rabies is shown.

Table 1. Rabies incidence in Poland in the years 1993 – 2001

Year	Number of rabies cases
1993	2648
1994	2238
1995	1973
1996	2527
1997	1494
1998	1329
1999	1148
2000	2224
2001	2964

From the data presented in Table 1 a considerable decrease in rabies cases between 1995 and 1999 can be seen followed by a sudden increase in two consecutive years.

3. Rabies cases in Poland in different animal species in the years 2001 – 2005

The occurrence of rabies in different animal species between 2001 and 2005 is shown in Table 2.

Table 2. Rabies cases in different animal species in the years 2001 -2005.

Species	Year				
	2001	2002	2003	2004	2005
Fox	2224	884	233	86	84
Racoon dog	204	96	54	13	10
Cattle	100	52	26	8	23
Cat	179	79	29	10	7
Dog	95	31	19	4	5
Total	2964	1191	388	136	138

A continuous decrease in the occurrence of rabies in the country could be seen until 2004. This tendency seems to stop in 2005.

4. Localization of rabies in Poland in 2004 and 2005.

In 2004 rabies cases occurred mostly along the border of Russian Federation (Kaliningrad region), Lithuania, Belarus, Ukraine and in the middle part of the country (around Poznan area in Wielkopolskie region and Namyslow district in Opolskie region). The epidemiological situation changed in year 2005, because only along the border with Russian Federation (Kaliningrad region) and Ukrainian positive cases were found. Nevertheless rabies still has occurred in the middle part of the country.

5. Rabies situation in neighbouring countries.

Poland is bordered by seven countries. The neighbouring regions of Germany and the Czech Republic are free of rabies. All the other neighbouring countries are infected

with the disease, particularly high incidence was found in Russian Federation and Ukraine (according to WHO bulletin).

The next lecture was given on the vaccination programme in Poland.

According to the Act of 11 March 2004, rabies is a disease subject to an obligatory notification and eradication in Poland. Dogs at age over 3 months, as well as wild foxes are subject to an obligatory preventive vaccination against rabies. In the veterinary administration there are three levels: central, regional (16) and district (304). Out of them, the regional level (regional veterinary officers) is responsible for the programme of preventive oral vaccination of foxes against rabies.

According to the legislation, the oral vaccination of foxes can be stopped in a region, where in the last 3 years there was no rabies and in the bordering regions also no rabies occurred. In general 20 baits are distributed per km². In regions where the rabies incidence was high, the number of baits was increased. In 2005, 20-35 baits per km², and in 2006 20-35 baits per km² were distributed in certain regions. In Poland Fuchsoral and Lyspulven vaccines are registered for vaccination of foxes. Additionally, as registered in EMEA also Rabigen SAG2 vaccine is authorised to be used.

In 2005 the oral vaccination of foxes has been carried out in the frame of PHARE project PL 2003/005-710.04.04 - "*Eradication of rabies in Poland*" and 16.445.000 baits were purchased and distributed. The tenderer which won the bid for the supply of vaccine within the project concerned was company Impstoffwerk Dessau-Tornau GmbH the manufacturer of the Fuchsoral (SAD B19) vaccine. Thus, for the first time, the country was covered by the range of 25 to 35 baits per km² in that year. Moreover, within the same project additional amount of 1.644.500 baits was purchased to be distributed in spring 2006 in 10 regions (voivodships) chosen based on the risk assessment. Therefore, during the spring campaign 2006 more than 20 baits per km² will be distributed in 10 voivodships.

Furthermore, in Poland the vaccine is distributed twice in a calendar year spring campaign takes place in April–May, while autumn campaign in September–October. During the spring campaign bait up-take and immunization of young foxes seems to be problematic since they are born in March–April. The bait distribution can be performed once a year, if neither within the region (voivodship) nor within the area of bordering regions (voivodships) rabies have been detected for the two consecutive years. As regards bait distribution methods, plane and manual distributions have been applied. Manual distribution is carried out in borders of urban agglomerations, dumping grounds, parks of cities and cemeteries.

The monitoring of vaccination has been controlled by the Regulation of Ministry of Agriculture and Rural Development of December 17, 2004. In the frame of the monitoring of vaccination, 8 foxes are shot per 100 km². In Poland, annually 21.532 foxes have to be examined for bait up-take and efficacy of vaccination.

The next speaker gave lecture on rabies situation in Wielkopolskie region. Oral vaccination of foxes has been carried out in the region since 1995. In 1999, 29 cases, and in 2000, 52 rabies cases occurred mostly in the central-Eastern part of the region. In 2001 a dynamic increase in rabies incidence was seen, 359 positive animals (296 foxes and 41 raccoon dogs) were found. In 2002, also high number, 339 cases were detected. From 2003, a continuous improvement in the rabies epidemiological

situation was demonstrated with 166, 41, 12 cases in the three consecutive years. In 2006 until the end of March, 3 cases have been diagnosed.

In 2005, 35 - 40 while in 2006, 35 baits will be distributed per km² in the Region. To monitor the vaccination campaign vaccine up-take and sero-conversion tests have been performed.

The main points of the campaign organization are the followings:

1. Tenders for the vaccine purchase and distribution.
2. Public information.
3. Information of district veterinary officers.
4. Setting out posters to schools, villages, etc.
5. Information of National Parks, Hunting Associations, etc.
6. Military authorization for the distribution of vaccine on the military-owned premises.

DAY 2

The participants visited the Regional Veterinary Laboratory in Poznan. This laboratory performs the rabies diagnostic tests for the Wielkopolskie region.

Dr. Marcin Smreczak gave a lecture on “Vaccination monitoring and rabies surveillance in Poland”.

In Poland, 16 regional veterinary laboratories carry out rabies diagnostics and the following methods are being used:

- Fluorescence Antibody test (FAT),
- Mice inoculation test (MIT)and,
- Isolation of virus in neuroblastoma cells (RTCIT).

Furthermore, in order to check the effectiveness of oral vaccinations of foxes against rabies three regional veterinary laboratories have been nominated to perform rabies sero-conversion test – rapid fluorescent focus inhibition test (RFFIT) and five to test vaccine up-take (tetracycline marker in the mandible bones) in immunized foxes.

As a molecular biology method for virus genom detection the nested, PCR method has been applied in the National Reference Laboratory. The primers are used according to the recommendation of AFSA, Nancy- Community Reference Laboratory for rabies.

The National Reference Laboratory for rabies in Poland is National Veterinary Research Institute in Pulawy, which also apart from all the confirmatory tests for rabies since 1 April 2006 (new legislation entered into force) also performs tests for differentiation of virus strains in positive animals (foxes) as an additional test of vaccination monitoring

The results of monitoring tests are summarized in Table 3.

Table 3. Results of vaccination monitoring

Year	Per cent positive	
	Tetracycline marker	Serology
2001	52,40	62,1
2002	66,7	72,9
2003	78,4	92,8
2004	82,5	94,0

A clear contradiction can be seen between the results of tetracycline marker and serology tests.

Conclusions and Recommendations

Conclusions

1. Poland has established a well defined rabies eradication programme.
2. Rabies eradication has progressed well in the last two years and an important reduction of cases is observed in the country.
3. Rabies diagnosis and monitoring of oral vaccination campaigns seem to be well organised and supervised.
4. Post-vaccination monitoring indicates good effectiveness of the oral vaccination programme.
5. A permanent threat of re-introduction of rabies from some neighbouring third countries is perceived.

Recommendations

The Polish authorities should consider the eradication of rabies as a priority and implement the following recommendations as appropriate:

1. Manual distribution of vaccine baits in urban areas should be carried out in high risk areas.
2. Flying distances should be adjusted to 500 m in high risk areas.
3. Quality control of vaccine baits during the campaign (titration) should be carried out for every batch according to recommendations of the EU Scientific Report.
4. The spring vaccination campaign should be carried out on the second half of May.
5. The current epidemiological situation requires the maintenance of vaccination of the whole territory of Poland for at least 2-3 years.
6. On the basis of epidemiological analysis the areas where vaccination can be stopped should be appropriately defined at a national level independently of the administrative division (voivodships) of the country.
7. Co-ordination of activities among the neighbouring regions (voivodships) should be enhanced.

8. An appropriate co-ordination and communication, if possible, should be established with the neighbouring countries especially with Russian Federation and Ukraine. The previous EU experience on collaboration with the third countries could be further explored.
9. A central national epidemiological unit devoted to rabies should be set up. In close collaboration with NRL the main tasks of this unit are to (i) evaluate the success of ongoing oral vaccination campaigns, (ii) setback analysis, (iii) improve and adapt the vaccination strategy to the prevailing conditions and (iv) consultancy service to the ministry.
10. The specificity of the serological testing including the quality of sera for monitoring of sero-conversion should be improved.
11. For rabies surveillance (rabies diagnosis) the sample size should be maintained at the level of 8 animals per 100 square kilometres.
12. For the follow-up of oral vaccination campaigns (sero-conversion and bait uptake) an appropriate sampling strategy and sample size should be defined.

AGENDA
of the visit of the Task Force's Sub-group for rabies
between 6 and 7 April 2006 in Poznan (Poland)

6 April 2006 (Thursday)

07:30

Departure for Wielkopolski Aeroclub from the hotel.

08:30 – 11:30

Visit in the Wielkopolski Aeroclub – on-the-spot observation of vaccine distribution

12:00 – 13:00

Lunch in the Regional Veterinary Inspectorate in Poznan.

13:00 – 14:30

Situation of rabies in Poland. Situation of rabies in neighbouring countries.
Vaccination programme in Poland: vaccines, strategy.
(representative of central level – General Veterinary Inspectorate)

14:30 – 16:30

- Situation of rabies in Wielkopolskie region.
- Organization of the vaccination campaign and implementation of measures at regional level.
- Vaccine quality control.
(representatives of Regional Veterinary Inspectorate in Poznan)
- Involvement and contribution of stakeholders.
(representatives of Polish Hunting Association).

16:30 - 17:30

Open discussion

17:30 – 18:00

Internal meeting of the Task Force members

18:45 – Departure from the hotel

19:00 - Dinner in the Old Town of Poznan.

7 April 2006 (Friday)

09:00 – 10:00

Visit in the Regional Veterinary Laboratory in Poznań performing rabies diagnostics for the wielkopolskie region.

10:00 – 10:30

Vaccination monitoring and rabies surveillance in Poland. (representative of the National Reference Laboratory for rabies – National Veterinary Research Institute in Pulawy)

10:30 – 12:00

Internal meeting of the TF's group.

12:00 – 13:00

Recommendations of the group and final discussion.