Encouraging results of oral immunization of foxes against rabies were presented at the "Intoral" workshop organized by WHO, with the participation of OIE; the 41 participants came from 15 European countries and from the USA (see Annex 1). This is of importance as attempts to control rabies by hunting, gassing and trapping have been shown to lead to local and only transient success.

Field trials on oral immunization were started in 1978 in Switzerland, and in 1983 in the Federal Republic of Germany using live attenuated SAD viruses as vaccines.

The preparation and use of specific monoclonal antibodies for vaccine virus identification, as well as the availability of a machine-manufactured bait (Tübingen fox bait) in 1985, led to the extension of the trial into large territories.

1. Vaccine and bait application
1.1 Conclusions

Results of large-scale field trials in Austria, Federal Republic of Germany, Italy and Switzerland suggest that the elimination of wildlife rabies can be achieved in a cost-effective way by oral vaccination campaigns.

Laboratory research between 1973 and 1978 and field trials since 1978 have not indicated a risk of reversion of the virus to virulence, nor an epidemiological significance of residual pathogenicity of the SAD virus strains used in the Berne (Switzerland) and the Tübingen (FRG) B19 vaccines. Three cases of vaccine-induced rabies, believed to be due to immunosuppression, were registered after field use of 1 million doses of the SAD Berne vaccine. No case of vaccinal rabies has so far been observed after field application of 2.4 million doses of the SAD B19 vaccine.

Despite this, evidence presented at the meeting suggests that vaccination using the Berne and Tübingen vaccine strains by the oral route is safe in the field, feasible and practical.
1.2 Recommendations

Oral immunization of foxes as a method of control of wildlife rabies should retain an experimental status and be kept under the supervision of national and international authorities.

Field trials using the technology of vaccine and bait application, as presently carried out in many European countries, can be recommended for other countries which have not yet begun with oral vaccination. There should be transfer to national core groups of planning, strategic and managerial elements through WHO collaborating centres with field and laboratory experience.

Until the methodology is adapted and accepted for large-scale application, national services should, however, not neglect the use of the other control measures mentioned above since a combination of measures may eventually be taken into consideration in national strategies. The exploration of more efficacious methods of rabies eradication should not be neglected.

2. Harmonization of national projects

As rabies does not respect national boundaries it is necessary for governments to cooperate at all levels to achieve an effective vaccination programme. Such a programme needs to encompass exchange of virological and epidemiological information, operational planning, and training.

In view of the rapidly expanding projects in Austria, Belgium, Federal Republic of Germany, France, Italy, Luxembourg and Switzerland, it is recommended that participating countries carefully coordinate their activities along common borders.

WHO may be informed by governments concerning national core groups of coordination (covering epidemiology, ecology, vaccine provision, campaign management, intensified surveillance). Establishment of such core groups would be desirable for national programme development and for international cooperation, particularly in respect to programmes along national borders requiring supplementary information as well as education activities or seconding control programme in the neighbouring country.

An exchange of information at six-monthly intervals is recommended. The participating countries should notify the WHO Collaborating Centre for Rabies Surveillance and Research, Tübingen, about past and planned vaccination campaigns, with maps and the results of follow-up examinations. The Centre could then offer this information to all interested parties every six months, or in the form of a report in the "Rabies Bulletin, Europe".

The results of field trials should be evaluated at the end of each national campaign and continuous surveillance and control should be ensured thereafter.

It is further recommended that the countries bordering vaccination areas be encouraged to take measures to control wildlife rabies along their borders.
3. **Specific points**

3.1 At present the Tübingen fox bait is being used in Austria, Belgium, Federal Republic of Germany, France, Italy and Luxembourg. Switzerland will continue to use the chicken-head bait, but is carrying out experimental work on the development of a new bait.

3.2 The participants from Italy, Switzerland and the Federal Republic of Germany recommended that Austria should consider extending vaccination campaigns in border areas.

3.3 Bavaria is interested in the examination of fox specimens from the Tyrol (Austria) to obtain information on the influx and outflux of these animals.

3.4 Belgium, France, Federal Republic of Germany, Luxembourg, Netherlands and Switzerland will define a common strategy with the aim of creating a continuous, immune belt using natural barriers. This should form as large a rabies-free area as possible covering the common borders of the countries involved. Details will be discussed at a technical meeting early in 1987.

4. **Rabies-free territories**

   In rabies-free islands, existing methods of prevention of disease introduction or re-introduction should continue.

   Rabies-free countries which border endemic areas should maintain their status through increased awareness and enhanced surveillance exchange, with contingency plans for dealing with disease introduction (vaccine trials, operational plans, training, etc.).
ANNEX 1

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