

EUROPEAN COMMISSION FOR THE CONTROL OF FOOT-AND-MOUTH DISEASE

REPORT OF THE

**Bonn,
Federal Republic of Germany
16 - 19 April 1984**

**FORTY-SIXTH SESSION
OF THE EXECUTIVE COMMITTEE
OF THE EUROPEAN COMMISSION
FOR THE CONTROL
OF FOOT-AND-MOUTH DISEASE**



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

AGA: EUFMD/X/1984/1

REPORT

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Forty-sixth Session of the Executive Committee

of the

European Commission for the Control of Foot-and-Mouth Disease

held in

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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome, 1984



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INTRODUCTION

The Forty-sixth Session of the Executive Committee of the European Commission for the Control of Foot-and-Mouth Disease was held at the Federal Ministry of Food, Agriculture and Forestry, Bonn, Federal Republic of Germany, from 16 to 19 April 1984.

Present:

Executive
Committee

Dr. A. Rojahn, Federal Republic of Germany	Chairman
Dr. F. Walla, Austria	Vice-Chairman
Dr. N. Tanev Belev, Bulgaria	
Dr. C.A.M. de Andrade Fontes, Portugal	
Dr. W.H.G. Rees, United Kingdom	
Dr. J. Janssen, Netherlands representing Dr. M.J. Dobbelaar	
Dr. C. Riggerbach, Switzerland representing Dr. H. Keller	
Dr. J.G. van Bekkum, Netherlands	Chairman, Research Group

Secretariat

Dr. P. Stouraitis
Secretary, European Commission for the Control
of FMD

Miss J. Raftery
Administrative Assistant, European Commission
for the Control of FMD

FAO

Dr. Y. Ozawa
Chief, Animal Health Service,
Animal Production and Health Division

On behalf of Mr. Kiechle, Minister for Food, Agriculture and Forestry, Dr. Scholz welcomed the Committee to Bonn and wished them success in their deliberations. In his brief address he underlined the significant role the Executive Committee played in the work of the Commission. He recalled the outstanding contribution of the Commission over the years to the control and eradication of foot-and-mouth disease and exhorted member countries not to relax their vigilance even if a very favourable disease position has been reached in Europe.

The Chairman informed the Committee that owing to illness, Dr. Berger, Finland, and Dr. Keller, Switzerland, were unable to attend. He welcomed Dr. Ozawa from FAO, and before proposing adoption of the Agenda he expressed satisfaction that since the last meeting, France and Poland had become full members, and it was hoped that the other countries wishing to join would very soon find ways and means to overcome the obstacles impeding membership.

1. Adoption of Agenda

The following Agenda was adopted on the proposal of the Chairman:

1. Adoption of Agenda
2. FMD position and prophylaxis in Europe
3. FMD position in other regions and particularly in countries exporting to Europe
4. Swine vesicular disease position in Europe
5. Research Group activities and items raised by the Twenty-fifth Session of the Commission
6. Efficiency of checkpoints at European borders notably in southeastern Europe
7. FMD prophylactic schemes in Europe; cost-benefit studies on FMD vaccination policies
8. Review of main regulations on disease control made by the Commission and their application by member countries
9. Administrative matters
10. Any other business
11. Adoption of the Report

The Secretary reported on the activities of the Secretariat during the period under review.

2. FMD position and prophylaxis in Europe

2.1 FMD position in Europe during 1983

The Secretary introduced the relevant document and stated that the disease situation remained generally favourable with the exception of the Iberian Peninsula where a number of outbreaks had been reported, and the Netherlands, where after almost seven years of disease freedom, six outbreaks had occurred between 30 December 1983 and 2 February 1984. (Appendix I).

Portugal Serious outbreaks of FMD, type A5, totalling 164 cases, were reported in 1983. More than 3,000 animals (cattle, sheep, goats and pigs) had been affected. A mass vaccination programme was applied, and by the end of 1983, 1,073,832 cattle, 39,839 sheep and goats, and 236,780 pigs had been vaccinated. The Portuguese representative circulated a brief report giving additional information on the FMD situation in his country.

Spain From January to July 1983, the country was affected by a number of outbreaks of type A5 which occurred in the central and northeast provinces. Strict sanitary measures, and occasionally stamping out of all affected and suspected animals, were applied with 1,638 cattle and 4,203 sheep and goats being slaughtered.

A mass vaccination campaign was applied with trivalent O1/A5/C vaccine involving cattle, sheep and pigs. By the end of 1983, 4,500,000 cattle, 10,000,000 sheep and

3,000,000 pigs had been vaccinated.

The Committee, following discussion of the FMD situation in the Iberian Peninsula, proposed finally that the national authorities in Spain and Portugal should be contacted with a view to arranging a visit to both countries for the purpose of reviewing the FMD situation. The Secretary and two members of the Committee should undertake this visit which would be aimed at assisting the countries concerned in their efforts to control and eradicate the disease.

Netherlands After a period of almost seven years' freedom from FMD (type A on 7 January 1977), six outbreaks of FMD sub-type O1 were diagnosed; four in the Noord-Oost Polder on 30 December 1983, and two in the province of Noord-Holland on 20 January and 2 February 1984. Twenty-one young unvaccinated cattle of less than one year were affected. The following strict eradication measures were applied:

- 1) All animals of susceptible species present on the affected premises were killed on the affected premises, and afterwards the dead animals were transported to the rendering plants in completely closed containers.
- 2) In total, 1,223 cattle, 110 pigs, 83 sheep and 13 goats were killed with a total compensation of 3 million Dutch Guilders.
- 3) A complete standstill of all cattle, pigs, sheep and goats, as well as prohibition of the movement of livestock trucks was enforced in both zones around the affected premises as from 30 December 1983 and 20 January 1984 respectively.
- 4) The annual vaccination with trivalent vaccine of all cattle above the age of four months was completed as soon as possible, first in the infected zones, later also in the rest of the territory.
- 5) In the infected zones emergency vaccination was carried out on cattle from 2-4 months with monovalent vaccine type O, sheep and goats above two weeks of age with trivalent vaccine, and pigs above two weeks of age with monovalent vaccine type O. These vaccinations were completed within two to three weeks of the initial outbreaks.
- 6) After removal of hay, straw, animal feed, milk, etc., the buildings were cleansed and disinfected. As from 7 March 1984, all restrictions have been lifted, and in accordance with the relevant definitions of the International Zoo-sanitary Code, the country was declared free of FMD.

The source of infection is still under investigation. The animals were killed on the farm after premedication with Rompun 1-2 ml followed five minutes later by the administration of T61 +50 ml.

In addition, it was reported that the virus caused only mild clinical symptoms of disease in the large herd of twelve-month old fattening bulls involved in the first outbreak, some animals showing old lesions of FMD in the oral cavity at the time of killing. FMD vaccine can with certainty be ruled out as the source of infection as no vaccination had been practised in the area for over nine months. As the first outbreak occurred about 15 km from the FMD laboratory at Lelystad, the laboratory had to be considered as a possible source of the infection. Studies carried out at the AVRI, Pirbright, and at Lelystad indicate that the virus is very similar to the O1 vaccine production strain

OBFS1860. This virus is used in several European vaccine production laboratories. Vaccine using this strain had been manufactured at Lelystad since September 1983.

Virus transmission through aerosols had been considered as a possibility as the prevailing winds were often southwesterly. However, no animal experiments using this strain of FMD virus had been carried out since 11 November 1983. All carcasses are heat treated in the Institute's rendering plant. Filters in both the vaccine production plant and animal stables had been checked in the first three weeks of November and had met the specifications. Personnel movements are still being examined (there were some hundred visitors in November and December) but so far the investigations carried out have not revealed the means by which a virus could have escaped from the laboratory.

Denmark Complete information on the one FMD outbreak which occurred on 13 January 1983 on the island of Funen was provided by the Danish Veterinary Services at the Twenty-fifth Session of the Commission in April 1983. Denmark was declared free from FMD on 14 February 1983.

Turkey In Turkey the FMD position has followed the same pattern as in previous years. A positive factor is the maintenance of disease freedom in Thrace since 1978. In Anatolia both virus A22 and O1 were present during 1983 with a total of 406 outbreaks reported in cattle, sheep and goats, with 2,684 animals affected. FMD prophylaxis and control was carried out in 1983 with vaccine produced at the Ankara FMD Institute where production is continuing at the capacity permitted by existing laboratory facilities.

The Committee expressed its satisfaction that the Turkish government had succeeded in establishing collaboration with the FMD Institute in Brescia, Italy, for the completion of the new FMD vaccine plant in Ankara with the financial assistance granted by the EEC. It is expected that the new laboratory, with an annual production capacity of 40,000,000 doses of monovalent vaccine, will be completed by the end of 1986. This will permit Turkey to implement wide national vaccination programmes and to carry on the campaign in Thrace with locally produced vaccine. This was also the objective of the assistance given to Turkey by the Commission and by FAO since 1969, and that provided by EEC at present. (see page 6).

U.S.S.R. FMD in the U.S.S.R. occurred in sporadic form with outbreaks of type O1 and A22 reported in, for instance, Georgia, Armenia and Azerbaijan during 1983. The Secretary informed the Committee that information on the FMD position in the U.S.S.R. had been provided regularly to the Commission by the Main Veterinary Department of the U.S.S.R. Ministry of Agriculture. The Committee expressed appreciation of the cooperation shown by the U.S.S.R. in providing information on the FMD situation and reiterated the wish that exchange of scientific information on field strains isolated in Europe, including the U.S.S.R., be encouraged.

2.2 FMD position and prophylaxis in Europe

Prophylactic schemes

The Secretary, in introducing the relevant paper, stated that there had been no change from the programme carried out in 1982 with the exception of those countries where FMD had been reported. (Appendix I).

The Committee recognized that because of the continuing improvement in the FMD situation in Europe, pressures were mounting to decrease the level of routine vaccination carried out under national programmes. The Committee agreed that the same policy should

continue in FMD prophylaxis in Europe for the present but the position would be reviewed when the results of the cost-benefit study on the prophylactic vaccination are completed. This would give more reliable data for reviewing the prophylactic policy in those countries where routine vaccination programmes are practised (see page 10).

The Committee recognized that the present prophylactic policy might not be optimal; protection experiments using field virus might clear up this point. The real danger might not be the classical European FMD virus strains but rather strains for which the present vaccination policy may not be fully effective.

Vaccine bank

The U.K. reported that good progress continued to be made with the establishment of an emergency vaccine bank. Following the meeting in Oslo, five countries (Finland, Sweden, Norway, Ireland and U.K.) had indicated their acceptance of the proposals (listed hereunder) and financial commitment to the establishment of the bank. New Zealand and Australia had also indicated their positive interest which they hoped would be confirmed by August 1984 at the latest: the protocols for vaccine production and legal basis for organizing the bank had been agreed. Invitations to tender for supplying vaccine had been sent to five European vaccine manufacturing laboratories, and a decision on the suppliers could be taken during a meeting of the groups at the OIE General Session in Paris. FAO continued to participate in discussions and monitor progress.

Summary of conclusions (Oslo meeting)

- The meeting agreed on the desirability of setting up a bank of FMD antigen according to the principles laid out in the paper presented by the U.K.;
- the bank would initially consist of frozen concentrated inactivated antigens of the four FMD serotypes (A24, A22, O1 and C1) subject to confirmation from AVRI, Pirbright, on the antigenic relationship between the A5 and A24 strains;
- the bank would be located and monitored at AVRI, Pirbright, and administered by the Ministry of Agriculture, Fisheries and Food;
- each country would convey its final decision in relation to participation in the bank to U.K. by 1 April 1984;
- progress made and future action necessary in relation to the setting up of the bank would be discussed at the OIE meeting in Paris in May 1984. The target operational date would be September 1984;
- FAO should maintain full details of the bank and assist the group in drawing arrangements with other "banks".

The Committee expressed, after discussion of some details, its appreciation and support of the efforts made by the U.K. for the establishment of the European vaccine bank and suggested that this bank, through FAO, maintain contacts with other groups of banks.

Vaccination campaigns in southeastern Europe

The Secretary gave details of the disease situation in this region during the period under review and on the implementation of the campaigns in 1983 and 1984, including the

supply of vaccine to Turkey and Bulgaria, and under the relevant EEC legislation also to Greece. For this purpose, 1,400,000 doses of FMD vaccine A22/01 had been supplied through IFFA laboratories, Teheran, Iran, at a cost of US\$ 700,000 for 1983-1984 under TF 9111. (Appendix I).

The Commission, at its Twenty-fifth Session in April 1983, recommended continuation of the campaigns beyond 1984 and this was also agreed by the EEC/FAO/OIE Tripartite Committee meeting held in Brussels in September 1983.

The Committee, considering the FMD situation in Turkey and the Near East, and bearing in mind that the Institute in Ankara is not expected to become fully operational before the end of 1986, agreed that the maintenance of the buffer zone in southeastern Europe be continued, and recommended that FAO request EEC and non-EEC countries for additional funds in order to ensure the continuation of the campaigns until 1987.

Emergency assistance to Turkey (Asia-1 vaccine)

The Committee reviewed and discussed the FMD situation in the Near East where Asia-1 virus type is presently widespread especially in Iran, and the potential threat this represents for Turkey and Europe was emphasized.

The Committee agreed on and approved the action taken by the Chairman and the Secretary to provide 300,000 doses of Asia-1 vaccine as emergency assistance to Turkey to be used in the frontier area with Iran/Iraq in order to avoid the introduction of such virus into Turkey. This assistance was carried out under TF 9097 (non-EEC).^{1/}

Following an in-depth discussion on the situation in southeastern Europe and the fact that the Turkish authorities had vaccinated with Asia-1 vaccine in the buffer zone area in Thrace, and the Turkish authorities' confirmation that no Asia-1 FMD outbreaks had occurred in Thrace and Anatolia, the Committee considered that it was not necessary at present to extend vaccination coverage to the entire area of the buffer zone (Bulgaria/Greece) with Asia-1 vaccine. However, the Committee approved the action taken in this respect by the Secretary and recommended that he continue to monitor the disease situation in southeastern Europe and that the Commission should be ready to take the necessary steps if an emergency FMD situation arises. For this purpose a source of FMD vaccine should be identified independently of its place of production. This vaccine must be of acceptable quality and must be available at short notice.

The Committee strongly emphasized the need for countries concerned with the maintenance of the buffer zone in southeastern Europe to inform FAO/OIE/EEC on any changes in the vaccination policy other than those recommended by the EEC/FAO/OIE Tripartite Committee.

In the discussion regarding the possibility of providing an emergency supply of Asia-1 vaccine, the Secretary pointed out that an EEC/OIE/FAO agreement prohibits the provision of exotic vaccine produced in Europe under the EEC and non-EEC Trust Funds (9111 and 9097). This is based on the concept of regionalization of FMD vaccine production agreed by the three organizations.

The Committee considered that such an agreement would be an obstacle to prompt action in the case of emergency supplies of exotic vaccine and recommended that this whole question be referred to the next meeting of the EEC/FAO/OIE Tripartite Committee.

^{1/} The vaccine was supplied through Rhône-Mérieux Laboratoire, Iran.

3. FMD position in other regions and particularly in countries exporting to Europe

The Secretary, in introducing the relevant document, reviewed the FMD situation in other regions in the world. Particular emphasis was given to the Near East region since it constitutes a direct potential threat for Europe because of the continuous flow of traffic at the frontiers and through the ports in south and southeastern Europe. (Appendix 2).

The Committee expressed concern at the fact that the disease situation in the Near East region is steadily deteriorating, and stressed the need to keep this region under continuous surveillance especially in countries bordering with Turkey. The Committee recommended that the Secretary keep the Commission informed on the situation in the Near East in order that prompt action can be taken if an emergency arises.

The disease situation in Africa and Asia was reviewed and discussed, especially the flare-up of FMD in Indonesia which had been disease free since 1979.

Particular emphasis was given to the FMD situation in South America and to the results of the trials carried out by EEC in Argentina on the effectiveness of the Belgian O1, C1 and A5 vaccine against A79 and A81 S American field virus strains. The Committee requested the Research Group to evaluate the technical protocols and results of these trials at the next meeting of the Group scheduled to be held in Brescia in June.

The Committee expressed appreciation of the improvement in collaboration between the WRL and PANAFTOSA in Rio, and suggested that efforts be made to increase and continue this collaboration. Bearing this in mind, the Secretary asked whether it would be useful for a joint meeting to be arranged between the Research Group and COSALFA at the PANAFTOSA Centre. The subject of such a meeting would be scientific matters of common interest and evaluation of the results of FMD trials carried out in this region by EEC.

The Chairman of the Research Group considered that this might be a first step towards improving collaboration. It was recommended that COSALFA's reaction to this proposal be obtained.

In this connection, Dr. Ozawa informed the Committee about certain activities of FAO. He stated that initial steps had already been taken to expand FAO's activities in animal health in Latin America, in collaboration with other international organizations such as PAHO, IICA and OIRSA.^{1/}

In the Near East, the activities of the FAO Regional Project (MINEADEP) will be strengthened by the recently appointed Senior Animal Health Officer to the Project. Special attention will be paid to the problems associated with trade animals in the region, and a meeting will be organized by the Project to discuss ways and means of improving the standard of health of trade animals.

As a follow-up to the FAO Regional Conference for Europe (1982), FAO is planning to hold an Ad hoc Consultation for the improvement of coordination of animal health programmes in Europe in Budapest, Hungary, on 28-29 June 1984.

FAO is in the process of developing a worldwide network of reference laboratories for emergency diseases, including FMD. In addition, FAO will encourage its member

^{1/} PAHO - Pan-American Health Organization; IICA - Inter-American Institute for Cooperation on Agriculture; OIRSA - International Regional Organization for Plant Protection and Animal Health.

countries to establish a network of FMD vaccine banks for emergency situations. When such banks are established, FAO will assume responsibility for the collection of information on these banks and will explore the possibility of exchanging vaccines between the banks when necessary.

4. Swine Vesicular Disease position in Europe

The Committee noted that there has been a remarkable decrease in the incidence of SVD in Europe during 1983; outbreaks were reported only in Italy (four) and France (one). In the U.K. no outbreaks of SVD have been reported since 21 May 1982. Extensive serological surveys carried out since then have not revealed any evidence of the disease. The U.K. should now be considered free from SVD.

The U.K. Delegate informed the Committee that the government had given great importance to the eradication of the disease because of the danger of its clinical confusion with FMD. Since 1972, SVD eradication has cost the U.K. £16 million in compensation alone.

The Committee noted the favourable SVD situation in Europe and complimented the U.K. on the success of the eradication campaign.

The Committee agreed that the present policy of the Commission regarding SVD remained valid.

5. Research Group activities and items raised by the Twenty-fifth Session

The Chairman of the Research Group summarized the report of the last Session of the Group held at Lelystad from 20 to 22 September 1983. The report of this Session has been circulated. Seven members of the Group had attended the Session and there were thirteen observers.

Four papers dealing with monoclonal antibodies had been presented. Monoclonal antibodies are considered powerful tools but interpretation of data sometimes proves difficult. Exchange of preparations and techniques should help to clarify questions.

The use of ELISA in the diagnosis, the differentiation of virus strains and the detection of antibodies was described. In the diagnostic field, the combination of the complement fixation (CF) test with ELISA increased the number of positives that was scored. Especially, the indirect sandwich test proved useful for this purpose. The ELISA is a very versatile technique but both the antigen and the antibody preparation used should be well defined.

It was reported that the assay of serum antibodies by neutralisation test is being applied more and more as an alternative for the cattle challenge test. Its use has to be based on sufficient statistical data.

Attention was drawn to the presentation by Dr. Moore from the Plum Island Animal Disease Centre. Results using VP1 produced through recombinant DNA techniques yielded interesting results, but in some instances vaccinated animals having developed neutralizing antibodies were not protected against challenge exposure.

After discussion on these points, the different items that the Commission had referred to the Research Group were discussed.

With regard to importation of semen for AI, the Group had concluded that semen from countries that did not vaccinate and which were known to be free of the disease, sound information on the epizootiological situation being available, constituted no risk.

Where regular vaccination was practised and no FMD was known to occur, a 30-day quarantine period before and after collection of semen, with close clinical observation offered sufficient safeguard.

With regard to this problem, as well as the question of meat imports, it was pointed out that some discrepancy existed between conclusions of the Group and those of the Permanent Commission for FMD of OIE. This matter will be taken up at the Group's next meeting.

The Group confirmed its standpoint regarding the desirability of national authorities taking adequate measures against the introduction of FMD virus or infective material destined for genetic manipulation in laboratories without proper facilities to handle FMD. (see page 11).

The question of safety standards for FMD laboratories will be discussed again at the Group's next meeting which is planned to be held in Brescia, Italy, 26-28 June 1984.

6. Efficiency of checkpoints at European borders notably in southeastern Europe

The Secretary gave background information on the checkpoints in southeastern Europe and their operation. The importance of the control measures applied to prevent the illegal importation of animal products from affected areas into Europe was stressed.

The Delegate of Bulgaria reported that:

Based on the law for the Veterinary Services and the regulations for the border veterinary inspection in the People's Republic of Bulgaria, border inspections for veterinary control and quarantine, directly responsible to the Scientific and Production Veterinary Union of the National Agro-Industrial Union, were established in all the border control stations, highways, terminals, airports and harbours.

The border inspection posts for veterinary control and quarantine carry out 24-hour border veterinary control over export, import and transit of live animals, food products and raw materials of animal origin and forage.

During 1983, border veterinary control and obligatory disinfection was effected on 246,509 trucks, 459,911 automobiles, 146,198 wagons, 2,892 planes and 2,455 ships.

32,919 kg of raw food products of animal origin found on checking the luggage of travellers and tourists entering the country had been confiscated and destroyed.

In addition to the sanitary measures applied, maintenance of the buffer zone in the 15 km border zone of the southern frontier is carried out each year against FMD in all susceptible animals with the vaccines provided by FAO. In 1983, 170,000 cattle were vaccinated in this zone with bivalent O1/A22 vaccine. These animals are not allowed into the interior of the country.

Owing to the present development and the constant expansion of the economic, commercial, tourist and other links between different countries and continents, effective border veterinary control can be established only on the basis of international

cooperation among the member countries of FAO and through the standardization of the methods, regulations and prophylactic programmes in the respective countries.

The Committee expressed its appreciation of the work carried out by the Bulgarian authorities in the checkpoint areas where heavy traffic enters Europe from the Near East countries and the successful way in which the country has been maintained disease free.

The Committee, aware of the potential risk which this traffic represents for Europe, requested the Research Group to study the problem and make recommendations on the necessity of measures to be used for external disinfection of vehicles from infected areas.

The Delegate of Bulgaria suggested that a team from the Commission visit the checkpoints in Bulgaria in order to acquire first-hand experience of the problems in the area.

7. FMD prophylactic schemes in Europe; cost-benefit studies on FMD vaccination policies

The Secretary informed the Committee on the results of a survey carried out on cost-benefit analysis as a follow-up to the recommendation made at the Twenty-fifth Session of the Commission. The results of the survey, based on the information provided by the member countries, as shown in the relevant document, were discussed. (Appendix 3).

The Committee agreed that data provided by the countries showed that cost-benefit analysis and evaluation of the present prophylactic scheme applied in different countries in Europe are not comparable because methods for FMD prophylaxis and control differ from country to country and the benefit to be obtained from each particular programme is very difficult to estimate.

Furthermore, the Committee considered that since parameters for a cost-benefit study have now changed in Europe under the present favourable disease situation, results of cost-benefit analysis should be reviewed. The Committee agreed that a group of selected countries should undertake a further study to establish a common basis for evaluation which would serve as a model for countries wishing to carry out cost-benefit analysis when reviewing their vaccination policy.

The Committee agreed that the Federal Republic of Germany, the Netherlands and the United Kingdom should undertake this task and make proposals in this respect to the Twenty-sixth Session of the Commission in 1985.

8. Review of main regulations on disease control made by the Commission and their application by member countries

The Committee reviewed and discussed some of the main conclusions and recommendations of the Commission since its establishment. It was agreed that the recommendations submitted for consideration to this Session of the Executive Committee remain as they stand with the following exceptions:

DISEASE SECURITY

(a) Institutes handling FMD vaccines including vaccine production plants

It was agreed that basic security standards should be drawn up by the Research Group and submitted to member countries for information and consideration. This matter should be an item for the Agenda of the Twenty-sixth Session.

(b) Manipulation of non-European strains of FMD virus - to remain as it stands.

GENETIC MATERIAL DERIVED FROM FMD VIRUS

This concerns all laboratories handling FMD genetic material in Europe. It was recommended that the Secretary request information from member governments on the policy applied on importing and handling in this respect.

FMD VACCINE SAFETY AND POTENCY

It was agreed that the Research Group's conclusion reached at the Session held in Pirbright, U.K., in 1982 remains valid.

ANIMAL MOVEMENT AND MEAT TRADE

It was agreed that the recommendation made by the Commission at its Twenty-fifth Session in 1983 should be modified as follows:

"Considered that restrictive measures should be applied only to the FMD affected areas and the period of enforcement of such measures could be the same as that applied, for example, in non-vaccinating EEC countries. Such measures should be applied to live susceptible animals and their products only."

9. Administrative matters

The Administrative Assistant presented the relevant document which included (a) the pledge position as at 31 December 1983, (b) the Organization's statement of account for Trust Fund 9042 as at 31 December 1983, (c) the breakdown of budget/actual expenditure for 1983, and (d) provisional budget for 1984. (Appendix 4).

The Committee was informed that of the countries in arrears for 1983, Hungary had paid in February 1984, and Belgium, Spain and Turkey had been requested to fulfil their financial obligations to the Commission for 1983 as soon as possible.

The Committee approved the statement of account and the breakdown of budget/actual expenditure.

Some brief explanations were given on the proposed budget for 1984 in response to the Committee's queries. The Delegate of U.K. informed the Committee that the World Reference Laboratory was in the process of reviewing the funds available for research and development, and it was considered that continuation of work at its present level would be very difficult since funds were insufficient. The cost of maintaining diagnostic and typing facilities for 1983 was £296,000. The Chairman of the Research Group stated that it would be in the interests of the European Commission that the World Reference Laboratory continue its work and recommended that the Committee make every effort to increase its present annual contribution to the WRL of US\$ 2,000. Dr. Ozawa, on behalf of FAO, stated that the Organization was in favour of an increase of 50 percent in its contribution, which at present stands at US\$ 2,000. After some discussion, it was agreed that the Commission's contribution to the WRL should be increased from US\$ 2,000 to US\$ 5,000. It was also agreed that the amount earmarked for fellowships, US\$ 4,000, be increased to US\$ 5,000. The Committee approved the Administrative Budget for 1984.

10. Any other business

Forty-seventh Session of the Executive Committee

It was agreed that the Forty-seventh Session of the Committee will be held from 5 to 8 March 1985. It will be held in the Netherlands.

Twenty-sixth Session of the Commission

It was agreed that the Twenty-sixth Session of the Commission will be held in Rome from 23 to 26 April 1985.

Future activities

The Committee will continue its activities along the lines of the recommendations for future activities adopted at the Twenty-fifth Session. In conformity with this the Secretary will, in addition -

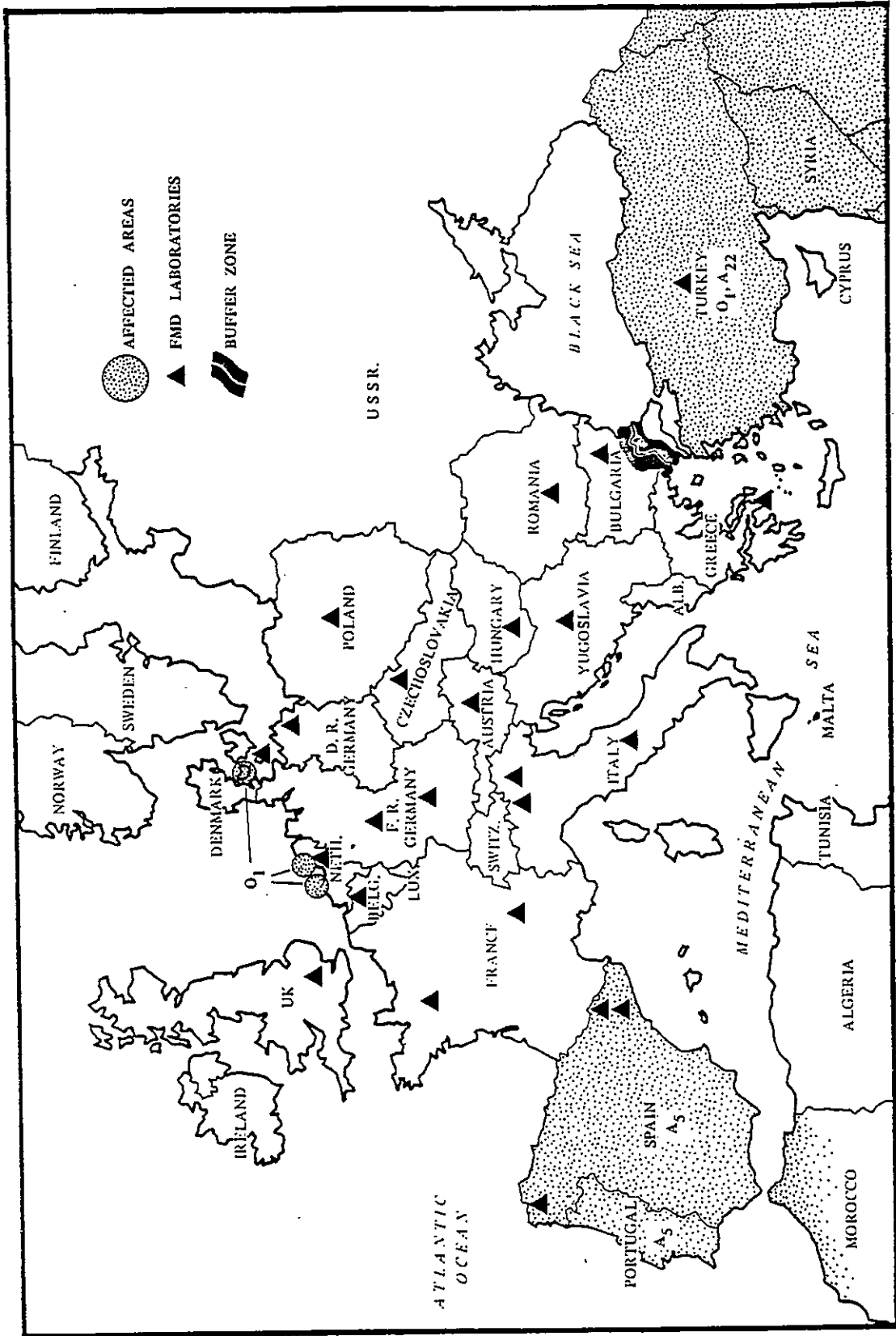
- 1) visit Spain and Portugal together with two members of the Committee; the national veterinary authorities in both countries will be approached for the purpose of obtaining their agreement to hold a joint meeting to review and discuss the FMD situation and problems related to its eradication in the Iberian Peninsula;
- 2) participate in meetings related to the European FMD vaccine bank and act as FAO liaison with other groups of banks;
- 3) take action for the implementation of vaccination campaigns in southeastern Europe until 1987. For this purpose additional funds will have to be requested through FAO from EEC and non-EEC countries;
- 4) collect information on FMD vaccine production plants in the world as well as type and quantity of vaccine available;
- 5) request member countries to give the Commission priority in receiving prompt and accurate information on outbreaks, evolution, virus identification and origin in order to be in a position to take whatever action is deemed necessary;
- 6) arrange for the selection of suitable applicants for fellowships within the financial limits provided in the budget for 1984.
- 7) Organize a meeting between three selected member countries of the Commission for the purpose of studying a common basis for evaluation of cost-benefit analysis of FMD vaccination policies in Europe.
- 8) Convene a meeting of the FAO/EEC/OIE Tripartite Committee during the Fifty-second General Session of OIE in Paris, to discuss the FMD position in southeastern Europe, the maintenance of the buffer zone, and the provision of exotic vaccine in case of an emergency.

11. Addoption of the Report

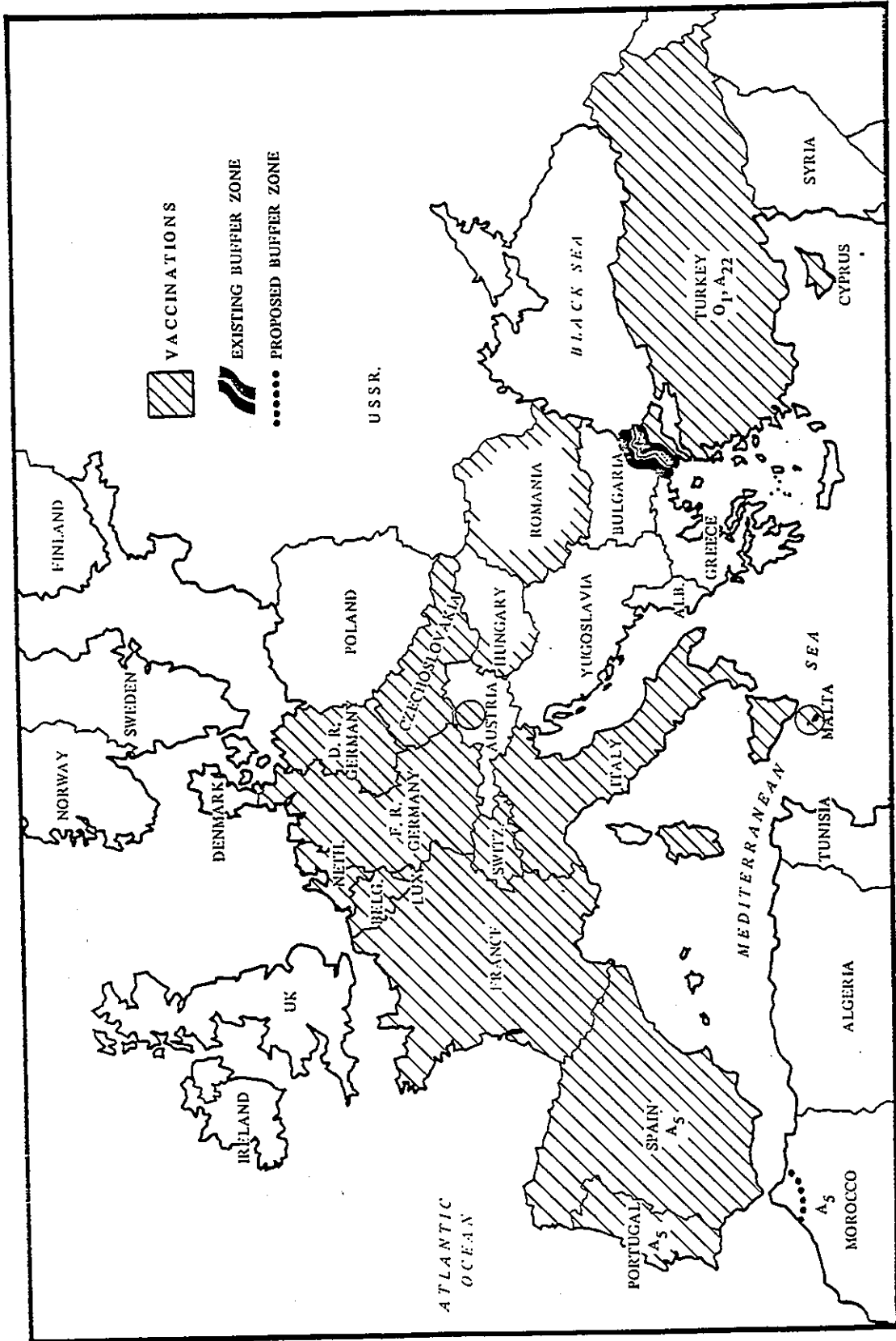
The report was adopted as presented. Before closing the meeting the Chairman of the Commission thanked the members of the Executive Committee for their contribution to the discussions, and on behalf of the Committee he expressed appreciation to the secretariat for the concise and timely presentation of the working documents and the work carried out since the last Session.

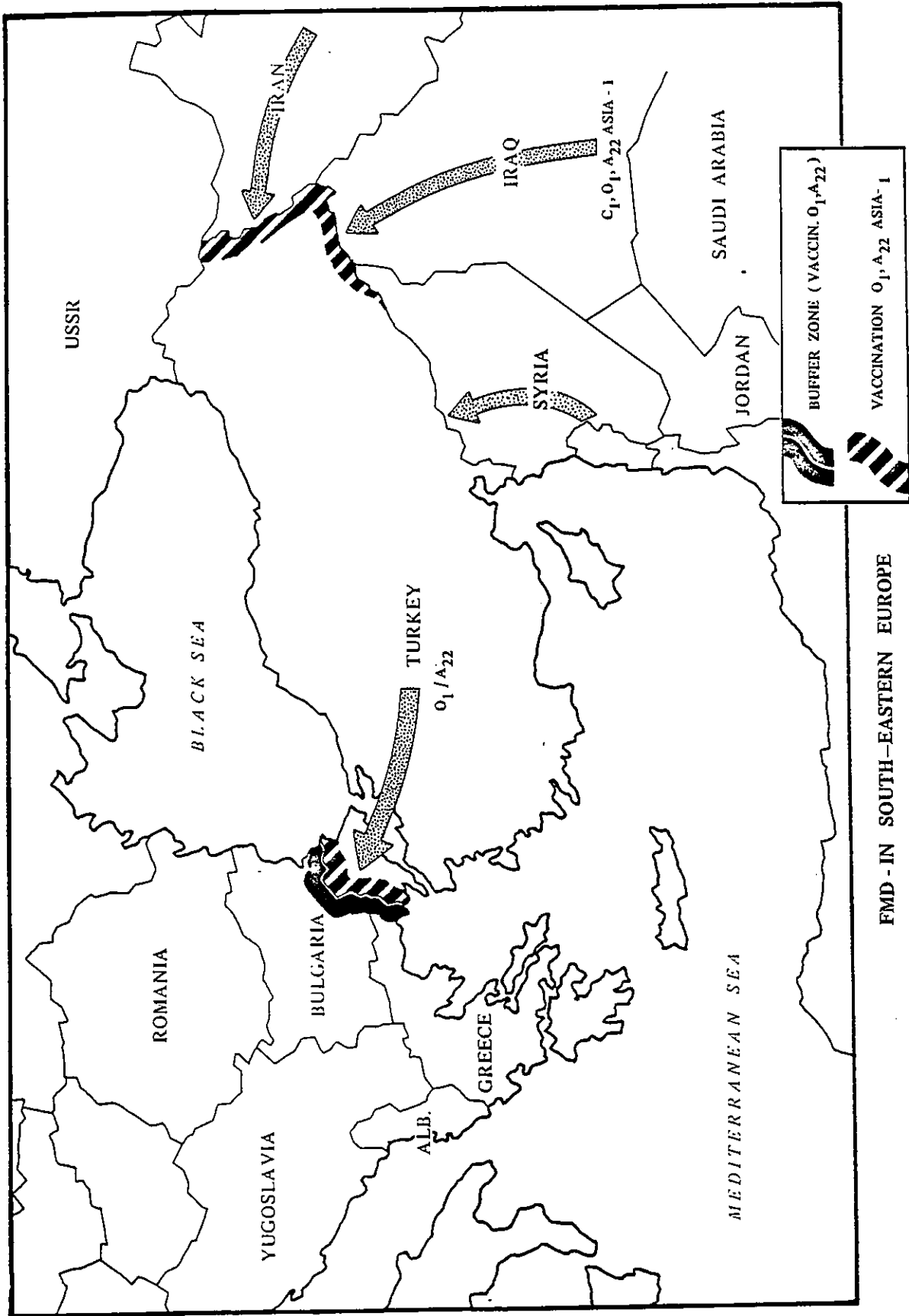
APPENDIX I

THE SITUATION OF FMD IN EUROPE IN 1983



FMD VACCINATION COVERAGE IN EUROPE IN 1983





FMD - IN SOUTH-EASTERN EUROPE

FMD position in other regions and particularly in countries exporting to Europe

Near East and North Africa

The FMD situation in the Near East region deserves special attention from the European Commission for FMD since it constitutes a potential threat for all of Europe because of the continuous flow of traffic over the frontiers and through the ports in south and southeastern Europe. Due to the uncontrolled importation of animals from infected countries the pattern of FMD distribution and development in the Near East is subject to frequent changes with conventional indigenous FMD virus strains alternating with new strains which have frequently spread throughout the region creating a serious menace for Europe. Turkey and Greece have also been involved and serious and concerted national and international efforts have been made to control the waves of exotic virus attacks (SAT-1, A22, ASIA-1). This threat is still present together with the possibility of further invasions following the steadily deteriorating FMD position in the Near East region. The FMD situation in the Near East countries during 1983 is shown in Table 1.

Morocco After two years freedom from FMD, in 1983 serious outbreaks of type A5 were recorded in several areas throughout the country. A mass vaccination campaign was carried out initially with A/Morocco/77 vaccine and later with type A5 vaccine. The Government imported more than 2 000 000 doses of FMD monovalent type A5 vaccine. In addition, 1 500 000 doses of A5 vaccine was provided by FAO through a TCP project. Thanks to a mass vaccination campaign and the application of strict sanitary measures Morocco succeeded in bringing the disease under control and only four outbreaks of type A5 were reported in October 1983 in the provinces of Tetouan and Meknes.

Tunisia No information has been made available on the disease position in the country. In 1982 several FMD outbreaks of type A5 were officially reported through the World Reference Laboratory.

Libya Since 1981, FMD is present in the country with several outbreaks of type O₁ recorded during 1983. Outbreaks were reported in 14 provinces in the northern part of the country with cattle, sheep and goats affected. The vaccination programme carried out in 1983 was limited to 10 678 cattle, 29 484 sheep and 2 030 goats.

Egypt FMD is endemic in the country with outbreaks of type O₁ reported in 1983.

Middle East countries

Lebanon FMD is widespread with 62 outbreaks reported during 1983, in cattle, sheep and goats. Types O₁, A22 and ASIA-1 were diagnosed in samples sent to the World Reference Laboratory. Vaccination was carried out on a small number of animals with O₁, A22 and ASIA-1 vaccine provided through FAO (48 210 cattle, 41 500 sheep, 7 140 goats and 4 000 pigs). Vaccination programmes and application of sanitary measures for disease

control are limited to disease-free areas only.

Iraq The Government, seriously concerned with the economic problems caused by the presence of FMD in the country (estimated losses in 1974 - US\$ 10 000 000), decided to establish an FMD vaccine production institute to meet the national requirements in FMD vaccine for disease prophylaxis and control programmes. The institute is located at Dora near Baghdad and was established in collaboration with Rhône-Mérieux, Lyons, France, at a cost of 15 million dollars. It was inaugurated in October 1983. It has a production capacity of 12 million doses per annum of FMD trivalent vaccine against the O₁, A22 and ASIA-1 virus types which are at the origin of epizootics in Iraq and in the region.

The strengthening of FMD vaccine production plants in the Near East is of paramount importance and it is gratifying for FAO and for the Commission to see the establishment of the new FMD vaccine production plant in Iraq. This will permit a regional supply of homologous vaccine and the implementation of vaccination programmes at national and regional level. Furthermore, the availability of exotic vaccine (types A22 and ASIA-1) will help Europe and other regions to handle emergencies caused by exotic FMD outbreaks.

Syria FMD continues to be endemic with 174 outbreaks of types A22 and O₁ reported in 1983 in cattle and sheep, involving 5 300 animals. Considering the political situation in the country, and the lack of information, this data clearly does not reflect the real disease situation in Syria.

Jordan No information available.

Israel No FMD outbreaks reported since 1981. Annual vaccination is continuing with coverage of all susceptible animals with O₁/A22 FMD vaccine. Since December 1983, ASIA-1 vaccine has been included in the general vaccination programme in view of the presence of ASIA-1 in the neighbouring countries.

Iran The FMD laboratory is located on the premises of the Razi Institute and is the only FMD vaccine production laboratory in the country. It has a capacity of more than 10 million doses of trivalent vaccine per year using suspended cell cultures and the Frenkel method in collaboration with Rhône-Mérieux, Lyons, France. Cell culture vaccine is produced by the Iranian staff while Frenkel vaccine is produced by the French group. An average of 40 kg of epithelium is imported weekly from France and used for vaccine production by the French group (one graduate and two technicians) who are still working at the FMD laboratory under special agreement signed between the Government and Rhône-Mérieux.

At present types A22, O and ASIA-1 vaccine are produced. The vaccine after having passed the controls for safety, sterility and potency is delivered to the Government. Only one fifth of the total amount of vaccine produced by Rhône-Mérieux is allowed to be exported.

The Government attaches great importance to control and eradication of disease in the country and to this effect they intend to increase vaccine production in order to reach a level that will cover fully all requirements. It is therefore the intention of the Government to set up a new FMD producing laboratory with a production target of 30 million doses of trivalent vaccine per year.

Vaccination programmes are carried out twice a year on all Government cattle farms with trivalent O, A22 and ASIA-1 vaccine and ring vaccination in the case of outbreaks. No stamping out is applied. Vaccine is provided free of charge only to Government farms.

Only the cattle population is covered by vaccination; sheep and goats are not vaccinated (70 million head).

As regards the FMD position in Iran, at present types O, A22 and ASIA-1 are recorded. Between January and October 1983 about 830 samples were submitted for typing to the FMD laboratory at the Razi Institute. Of these 95 were type O, one type A22 and 53 ASIA-1. Type O has been isolated in almost all provinces in Iran and A22 occurred only in one outbreak in Fars in June 1983. Type ASIA-1 was first identified in cattle in Lorestan province near the border with Iraq in June 1983. Since then a number of ASIA-1 outbreaks occurred in central and northern regions of the country (Teheran, East and West Azerbaijan).

Strict sanitary measures and ring vaccination with trivalent O, A22 and ASIA-1 vaccine of all susceptible animals in the affected areas were applied.

Saudi Arabia and the Gulf countries In S. Arabia, Kuwait, Oman, Yemen A.R., and in the U.A.E., information received from OIE and the WRL indicated that FMD type O₁ has been diagnosed during 1983 (Table 1). The information received on the disease position is generally incomplete and out of date and the number of samples submitted to the WRL for typing is too limited to permit valid conclusions on disease and virus type distribution in the whole region.

Relationship between Near East and European FMD strains of type O virus

The serological investigations carried out at the AVRI and at Rhône-Mérieux laboratories are reported on in the Report of the Research Group Session held at Pirbright in 1982 and that of the Session held at Lelystad in 1983.

The O virus strains which have recently appeared in the Near East do not differ widely. However, they are quite different from the O₁ classical European strains.

The cross challenges of cattle vaccinated with the European O₁ strain vaccine and challenged with O₁ Manisa 1969 virus (Turkey) confirm this difference showing 60% of heterologous protection.

The virus strains isolated from outbreaks in the USSR, O₁ USSR 1618 66 and O₁ Ukraine 81 are closely related to O₁ Near East strains and are quite different from the O₁ classical European virus strains (O₁ Lausanne 1965, O₁ BFS 1960, UK 1967).

The virus strains O Austria 81 and O Wuppertal W. Germany 82 show a high ratio with sera from O₁ USSR 1618 66, O₁ Manisa 1969, and O Sharquia, Egypt 1972.

The virus strain O₁ Greece 1981 shows a high ratio with O₁ Sharquia and O₁ Manisa 1969.

From the foregoing evidence it is obvious that the FMD position in the Near East and especially in the Middle East countries deserves special attention from the European Commission since it constitutes a potential threat for all of Europe. In addition the outbreaks which occurred in Austria, Greece and the Federal Republic of Germany, fortunately of type O₁, are a serious warning of the risk which still exists.

Africa

The disease is widespread on the continent with endemic or sporadic outbreaks of FMD types SAT-1, SAT-2 and SAT-3 mainly in Southern African countries and in South Africa, and type O in other African regions with the exception of Senegal (West Africa) where FMD outbreaks type SAT-2 were reported in 1983 (Table 1). Botswana continues to maintain its disease freedom since 1981. In Zimbabwe and Kenya extensive vaccination programmes are carried out every year but despite this FMD outbreaks are being recorded in both countries. Mozambique has now started an ambitious three year programme for FMD control with financial assistance from the World Bank and FMD experts and consultants have been appointed by the Government of Mozambique for the implementation of the project. However, in areas where animal movement cannot be controlled, and especially in border areas, FMD control should be based on coordinated programmes at sub-regional or regional level.

In those areas where the disease is endemic no livestock improvement schemes are operating, all cattle are indigenous, mainly Zebu race, and there is a low but persistent incidence of FMD. The infrequent epidemics, with mild clinical symptoms of the disease, give a false picture of the disease position. However, where exotic breeds have been introduced or where livestock improvement schemes and artificial insemination are being applied, disease spreads more rapidly following its introduction and epidemics are likely to occur more frequently with severe clinical symptoms. In addition National Game Parks or remote areas constitute a natural reservoir of FMD virus from where outbreaks frequently originate. For these reasons the FMD situation in many of the African countries should be considered not only on the basis of the number of FMD outbreaks reported by individual countries but also on the basis of breed of animals and system of breeding. In addition

the ecological situation in each country is a factor which must be taken into account in the preparation and implementation of national or regional programmes for FMD control in Africa.

Asia

The epidemiology of the disease on the continent can be divided into two FMD situations: the mainland situation and the island situation. On the mainland (India, Bangladesh, Burma, Thailand) the disease can be presumed to be endemic providing a reservoir of virus which is spread by movement of animals into the more developed areas where its presence can be more easily detected and reported.

It is generally accepted that FMD infection moves downwards from north to south involving Thailand and from there through uncontrolled movement of animals and export of cattle and sheep it spreads sporadically into the northern state of Malaysia. From India and Pakistan the disease is transferred to the Near East Region through the extensive trade in cattle and sheep which is carried out between these regions. In the southeastern region of Asia, owing to its geographical conformation (islands), the disease situation has improved; Singapore, Malaysia and Taiwan are free of FMD and not all the islands of the Philippines and Indonesia are included in the infected areas. In Lao, Kampuchea, and Viet Nam the disease is endemic with outbreaks of types O, A and Asia-1 on record.

Another aspect of the mainland situation is specific to Hong Kong where FMD and SVD are reported regularly in pigs imported from the southern provinces of China. Virus types isolated in Asia during 1983 were O, A₂₂, C and Asia-1, with Asia-1 being confined to the mainland (see Table 1 and WRL Cumulative Report for 1983).

Indonesia, after almost three years of FMD freedom, in 1983 suffered several FMD outbreaks on the island of Java. The responsible virus was identified as belonging to type O₁. Tests carried out at the WRL, Pirbright, showed a very close relationship with the S. American virus strain O Campos. A mass vaccination programme was launched by the Government of all cattle and buffaloes on the island with O₁BFS vaccine. Because of failure of the O₁BFS vaccine and following the typing results from the WRL, a second vaccination was carried out with O Campos vaccine produced by Wellcome as well as homologous O₁ Java 83 vaccine produced by Rhône Mérieux, Lyons. More than eight million doses of FMD vaccine was purchased by the Government for a double vaccination of all cattle and buffaloes in Java. Up to the end of November 1983, 6 167 000 doses of FMD vaccine had been used and the number of outbreaks reported in Java had decreased considerably.

FAO has followed closely the FMD outbreaks in Indonesia, and the Secretary of the Commission, together with the OIE representative, Dr. Kihm from Switzerland, visited Indonesia from 15 to 20 December 1983. The FMD situation was reviewed and discussed with the national authorities and advice was given on the disease control programme to be followed in Java. The Government policy is to continue vaccinating every year with imported vaccine until 1986 since the vaccine production capacity at the Surabaya FMD laboratory is limited to a hundred thousand doses per year. The infrastructure for FMD vaccine production in Asia is very poor and the existing vaccine production plants in Thailand and India do not meet the national requirements for the vaccination programmes. It is not expected that the situation will improve in the near future.

FAO is providing assistance to countries for the establishment of their own vaccine production facilities, as in the case of Burma, or to face emergency FMD outbreaks by providing vaccines and technical advice.

South America

During 1983 the FMD situation was considered as being favourable particularly in Brasil where the number of outbreaks reported was 30% less than that reported in 1982. In Peru, Venezuela, Bolivia, Paraguay and Uruguay there was a low incidence of the disease with only sporadic isolated cases being reported.

In Argentina the FMD situation deteriorated during 1983 especially from the month of May onwards owing to the heavy inundations in the north which created an abnormal movement of animals to southern and eastern areas. The epidemic affected mainly the provinces of Buenos Aires, La Pampa and Rio Negro. In the province of Rio Negro which is considered as a buffer zone of Patagonia, vaccination was not carried out systematically.

A summary of the FMD situation in South America from 1977 to 1983 based on data provided by the Pan American Center for FMD, Rio de Janeiro, is given hereunder.

South America - Herds affected by FMD, 1977-1983

Country	Virus type <u>1/</u>	1977	1978	1979	1980	1981	1982	1983
Argentina	O1	283	40	64	44	64	13	352
	A 24	313	114	178	339	429	39	23
	C 3	191	88	91	37	22	4	196
Bolivia ¹	O 1	2	5	59	9	2	-	1 ²
	A 24	15	4	2	5	3	3	1
	C 3	12	-	-	2	7	7	2
Brasil	O 1	383	731	755	655	217	85	50 ²
	A 24	2.131	667	380	403	721	588	143
	C 3	65	28	22	9	18	13	13
Colombia	O 1	231	190	445	263	87	50	192 ²
	A 27	183	118	87	76	99	79	21
Chile ³	O	2	-	-	-	-	-	-
	A	3	-	-	-	-	-	-
	C	7	1	-	-	-	-	-
Ecuador	O 1	36	37	64	23	12	9	22 ²
	A 24-27	8	9	16	31	35	35	37
Paraguay	O 1	14	8	77	3	5	6	9
	A 24	2	-	1	-	1	13	1
	C	4	2	11	-	-	1	-
Perú	O	15	-	4	-	4	-	2 ²
	A 24	-	9	30	24	2	6	1
	C 3	-	-	-	49	1	7	4
Uruguay	O	50	7	91	127	4	1	-
	A 24	187	9	7	6	14	2	1
	C 3	21	1	-	-	-	-	4
Venezuela	O 1	42	31	38	19	29	28	12
	A	19	17	23	18	22	13	5

1/ FMD virus subtypes refer only to 1983

2/ Partial data

3/ No outbreaks registered in 1979 and 1980. Country officially declared free of FMD and other vesicular diseases as of 1981.

Source: Reports from COSALFA-X countries and "Sistema Continental de Vigilancia Epidemiológica de las Enfermedades Vesiculares, CPFA, 1983"

Table 1

FMD SITUATION IN THE NEAR EAST REGION IN 1983

Country	No. of outbreaks	No./type of animals involved	Type of virus	FMD control policy
Morocco	34	209 504 cattle sheep and goats	A5	Mass vaccination, ring vaccination, sanitary measures
Tunisia*				
Libya	104	1 895 46 120 2 049 cattle sheep goats	O ₁	Sanitary measures; vaccination
Egypt	5	cattle	O ₁	Sanitary measures; vaccination
Israel**				
Lebanon	62	930 cattle/sheep	O ₁ /A ₂₂ /ASIA-1	Vaccination whole country with O ₁ /A ₂₂ /Asia-1 vaccine Stamping out and vaccination
Syria	174	5 385 cattle/sheep	O ₁ /A ₂₂ /ASIA-1	Sanitary measures; vaccination
Iraq	?	??	O ₁ /A ₂₂ /ASIA-1	
Iran	151	??	O ₁ /A ₂₂ /ASIA-1	
S. Arabia***	15	??	C/ O ₁	
Kuwait	7	350 cattle	O ₁	Vaccination; sanitary measures
Oman	11		O ₁	
U.A.E.	6		O ₁	
Yemen Arab Republic ¹	6		SAT-1/ O ₁	

* no information
 ** FMD free since 1981
 *** FMD type C reported in 1984
¹ FMD type SAT-1 reported in 1984

Table 2

Type of FMD virus detected in African and Asian Countries in 1983 (OIE, WRL)

<u>Countries</u>	<u>Number of outbreaks</u>	<u>Type of virus</u>
AFRICA		
S. Africa	10	SAT-2
Mozambique	-	SAT-2
Zimbabwe	5	SAT-2/SAT-3
Malawi	13	
Tanzania	6	SAT-2
Kenya	26	O ₁
Somalia	1	O ₁
Sudan	4	O ₁
Senegal	6	SAT-2
Nigeria	15	-
Ivory Coast	2	-
ASIA		
Bangladesh	-	-
India	9	O ₁ ,C,ASIA-1
Burma	-	O ₁ , ASIA-1
Buthan	1	O ₁
Thailand	151	O ₁ , ASIA-1
Malaysia	2	O ₁
Indonesia	160	O ₁
Hong Kong	20	O ₁
China	no information	

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CUMULATIVE REPORT FOR 1983

During 1983 240 samples from 25 countries have been examined for type of virus. Virus was demonstrated in 142 of these samples and the types of virus recovered are tabulated below.

COUNTRY	No. of Samples	O	A	C	SAT 1	SAT 2	SAT 3	Asia 1	SVD	No virus detected
AUSTRALIA	6	-	-	-	-	-	-	-	-	6
BHUTAN	1	1	-	-	-	-	-	-	-	-
CAMEROONS	3	-	-	-	-	-	-	-	-	3
DENMARK	4	3	-	-	-	-	-	-	-	1
HONG KONG	40	20	-	-	-	-	-	-	-	20
INDIA	11	8	-	1	-	-	-	-	-	2
INDONESIA	23	9	-	-	-	-	-	-	-	14
KUWAIT	3	-	-	-	-	-	-	-	-	3
LAOS	1	-	-	-	-	-	-	-	-	1
LEBANON	5	-	-	-	-	-	-	4	-	1
LIBYA	8	3	-	-	-	-	-	-	-	5
MALAYSIA	4	2	-	-	-	-	-	-	-	2
MOROCCO	10	-	9	-	-	-	-	-	-	1
OMAN	31	18	-	-	-	-	-	-	-	13
PORTUGAL	2	-	2	-	-	-	-	-	-	-
SAUDI ARABIA	28	19	-	-	-	-	-	-	-	9
SENEGAL	7	-	-	-	-	6	-	-	-	1
SOMALIA	2	1	-	-	-	-	-	-	-	1
SOUTH AFRICA	16	-	-	-	-	12	-	-	-	4
SPAIN	1	-	1	-	-	-	-	-	-	-
SUDAN	4	2	-	-	-	-	-	-	-	2
UNITED ARAB EMIRATES	6	5	-	-	-	-	-	-	-	1
YEMEN	14	11	-	-	-	-	-	-	-	3
ZAMBIA	5	-	-	-	-	-	-	-	-	5
ZIMBABWE	5	-	-	-	-	1	4	-	-	-
TOTALS	240	102	12	1	-	19	4	4	-	98

23 out of the 142 positive samples (16%) were typed as original suspensions and 119 (84%) after tissue culture.



APPENDIX 3

FMD prophylactic schemes in Europe; cost-benefit studies on FMD vaccination policies

At the Twenty-fifth Session of the European Commission for the Control of Foot-and-Mouth Disease held in Rome in April 1983, the position of FMD prophylactic schemes in Europe was discussed. The tendency to discontinue or reduce vaccination against FMD in a number of countries in Europe was considered to be a matter for concern. The role played by compulsory vaccination campaigns in reducing the incidence of FMD in Europe has been discussed at almost all meetings of the Commission, and its importance cannot be over-emphasized. However, there is a risk, especially among administrators, that the favourable FMD position achieved to date in Europe represents the attainment of complete eradication. Such a favourable disease position may be a strong temptation to decrease or change the system, as has been the case in a number of countries in Europe. The fact should not, however, be lost sight of that the continental area of Europe is not an FMD epizootiological and control unit area. Individual country plans for FMD control as a routine prophylaxis or to meet emergency FMD outbreaks should therefore take into consideration the interests of the European continent as a whole.

The Commission, at its Twenty-fifth Session, recommended that European countries undertake a cost-benefit study of the FMD vaccination policy before any decision is taken to change it. With this in mind, the Executive Committee at the informal meeting held in Paris on 24 May 1983 on the occasion of the Fifty-first Session of OIE agreed that this subject should be an agenda item for the Forty-sixth Session of the Executive Committee in April 1984. At this informal meeting it was suggested that a review of the current position be taken in order to help the Executive Committee formulate proposals for submission to the Twenty-sixth Session of the Commission in 1985. The results of the survey undertaken, based on the information provided by the member countries, are examined in the relevant Table attached hereto. Countries have been divided into two groups (a) non-vaccinating and (b) vaccinating. In each group of countries the FMD prophylaxis applied is shown as well as the results of the cost-benefit study on FMD control, and losses during major FMD outbreaks.

The analysis of the data provided by those countries which have replied to the questionnaire shows in the first part (non-vaccinating countries) twelve countries United Kingdom, Denmark, Norway, Sweden, Finland, Iceland, Ireland, Poland, Austria, Bulgaria, Yugoslavia and Greece. Of these countries only the U.K. has based its prophylactic scheme for FMD on a detailed cost-benefit study while Denmark has justified its FMD control policy on the analysis of the losses estimated during the FMD outbreaks which occurred on the Island of Funen in 1982. The remaining countries have not carried out a complete cost-benefit study of FMD control and their FMD prophylactic schemes are based on the present favourable disease position in each country.

Of the second group (vaccinating countries), only the Federal Republic of Germany and Italy have undertaken a complete cost-benefit study based on their prophylactic schemes. The other countries have not carried out a complete cost-benefit study on FMD control and the data provided have been based on a rough estimate of losses during major outbreaks and the cost of vaccine. Therefore analysis and evaluation of the present prophylactic scheme applied in different countries in Europe is not feasible since methods for FMD prophylaxis and control differ from country to country and the benefit to be obtained from each particular programme is very difficult to estimate. A cost-benefit study on prophylactic schemes in Europe should be carried out on the basis of the same data and methodology and obviously this cannot be applied to Europe as a whole but to groups of countries with similar characteristics i.e. type of livestock, infrastructure for disease control, epizootological situation, geographical position and importation policy. In order that a common prophylactic system can be established for the whole of Europe, the EEC proposals, the policy of the CMEA* countries and the prophylactic schemes of the non-EEC countries in Europe have to be considered jointly.

It should be noted that the prophylactic system in Europe is so fragile that it can break down at any moment considering that the entire pig and small ruminant population remains unprotected and control of animal movement and traffic is insufficient especially at the points of entry into Europe. Events over the last few years in Europe show that complacency with regard to the FMD situation is unjustified and countries should continue to be alert to the insidiousness of the disease. The presence of conventional FMD virus strains in the Iberian peninsula and exotic types A22 and ASIA-1 in Turkey and in the Near East are further evidence of the vigilance which should be exercised.

The national emergency plans for FMD outbreaks especially of an exotic type are based mainly on strict sanitary measures and stamping out but the procurement of a suitable FMD vaccine remains a problem for Europe. Only a few countries dispose of a reserve of vaccine of conventional types for emergency situations while in the case of an exotic FMD outbreak, the vaccine would have to be imported from abroad initially until an homologous vaccine could be produced by the national laboratory concerned. In the countries where vaccine production facilities do not exist supplies are entirely dependent on foreign production.

Information on national emergency plans for FMD control is given as an attachment to this paper.

In summarising the above, it can be concluded that -

- 1) it is important that European countries which have not yet undertaken a complete cost-benefit study on vaccination policies do so;
- 2) data and economic assessment should be standardized as far as possible within a country and between countries so that each FMD control programme can be evaluated on the basis of the same criteria;
- 3) following a complete cost-benefit study of the vaccination policy, groups of countries should coordinate and harmonise their programmes according to the prophylactic schemes chosen;
- 4) emergency plans for FMD outbreaks especially of an exotic type should be standardized in the European countries;
- 5) a strategic reserve of conventional and possibly of exotic FMD vaccine strains should be considered;
- 6) although individual European countries may be under threat of FMD infection from different sources, it is important that all countries cooperate in establishing an agreed policy for containing an outbreak of FMD in any particular country in Europe.

The U.K. opinion in this respect is that this cooperation should include a vaccine reserve of conventional strains and any exotic type considered to be a significant potential hazard. Such a reserve should also include an agreement to release a sufficient amount of vaccine to the infected country, to lend sufficient veterinary manpower to deal with the situation, and to provide laboratory facilities for speedy typing and sub-typing of the field virus responsible for an outbreak.

*Council for Mutual Economic Assistance

ANALYSIS OF COST-BENEFIT STUDY IN FMD CONTROL CARRIED OUT IN EUROPEAN COUNTRIES

(1) Non-vaccinating countries

<u>Country</u>	<u>Present FMD control policy</u>	<u>Cost-benefit study FMD control</u>	<u>Losses during major FMD outbreaks</u>
1. United Kingdom	Stamping out, no vaccination	On basis of detailed study of 1967/68 outbreaks: *A = £35 million ***C = £60 million Present cost of vaccine £42.5 million first year and £21.17 p.a. thereafter	1967/68 outbreaks: Direct - £35.1 million; indirect - £11.5 million Since 1968 one outbreak on the Isle of Wight (1981) - cost £135 900
2. Denmark	Stamping out, no vaccination	Not undertaken; estimate based on 1982 outbreaks: *A = D.Kr. 484 million **B = D.Kr. 1421 million ***C = D.Kr. 2820 million	1982 outbreaks: D.Kr. 484 million
3. Norway	Stamping out, no vaccination	Not undertaken	Major outbreak 1952 - no estimate
4. Sweden	Stamping out, no vaccination	Not undertaken	Last epizootic 1951-52 - S.Kr. 13.5 million (1.7 million US\$)
5. Finland	Stamping out, no vaccination	Study in course	Last outbreak 1959. Losses reported in 1983 amounted to 4.7 million FM
6. Iceland	Stamping out, no vaccination	Not undertaken	Never occurred
7. Ireland	Stamping out, no vaccination	Not undertaken	Last outbreak 1941 cost £410 200; current value equivalent US\$ 10 million
8. Poland	Stamping out, no vaccination	Not undertaken	Last outbreak 1972 - no estimates
9. Austria	Stamping out, ring vaccination	Not undertaken; estimate based on 1970-1983 outbreaks. ***C = A.Sc. 2350 million *A = A.Sc. 1572 million	From 1973 to 1981 five outbreaks - Direct: A.Sc. 572 million Indirect: A.Sc. 1000 million Total: A.Sc 1572 million
10. Bulgaria		Not undertaken	No estimate
11. Yugoslavia	Vaccination only of animals exported if requested; stamping out and ring vaccination	Not undertaken	No estimates

*A - non-vaccination policy

**B - ring vaccination policy

***C - compulsory annual vaccination policy

(2) Vaccinating countries

<u>Country</u>	<u>Present FMD control policy</u>	<u>Cost-benefit study - FMD control</u>	<u>Losses during major FMD outbreaks</u>
12. Federal Republic of Germany	Vaccination compulsory since 1968; stamping out	Study carried out in 1973 Period covered: 1960-1966 (before compulsory vaccination) 1968-1973 (after compulsory vaccination) 1974-1983 (as a forecast) The benefit from the compulsory vaccination for the period 1968-1973 amounted to DM 27.6 million. By deducting the vaccination cost of DM 20.6 million, the net benefit for the period 1968-1973 is DM 7 million.	1960-1966 outbreaks - 39,202 m. DM 1967 - 22,355 m. DM 1968-1982 - 223 000 DM p.a.
13. Italy	Vaccination compulsory since 1967, stamping out	Study covers period 1968-1983 Ratio cost benefit - 1 : 4.42	1968-1983 outbreaks cost 2.426 million Lire
14. Netherlands	Vaccination, stamping out		
15. France	Vaccination, stamping out	Not undertaken - cost of vaccination FF 205 million p.a.	1979 outbreaks - 17 000 000 FF 1981 outbreaks - 20 404 138 FF
16. Belgium	Vaccination, stamping out	Not undertaken	1951-1954 epizootics cost 1 000 million B.F.
17. Switzerland	Vaccination, stamping out	Not undertaken - cost of vaccine 5.3 million S.F. p.a.	1965-1966 epizootics cost 23 million S.F
18. Spain	Vaccination occasionally, stamping out	Not undertaken Ratio cost benefit ~ 1 : 6.7 based 1963/64 outbreaks	1963-1964 epizootics cost 6.750 million pesetas
19. Turkey	Vaccination, no stamping out	Not undertaken - estimated profit of disease eradication 5.300 million T.Lit. P.a.	1962/63/64 epizootics - estimated cost T. Lit. 968 341 731
20. Cyprus	Vaccination, stamping out	Not undertaken	Not estimated - last outbreak 1965
21. Luxembourg	Vaccination, stamping out	Not undertaken	Last outbreak reported before 1958 - no estimate

National emergency plan for FMD outbreaks especially of an exotic type
(measures to be applied/vaccine procurement)

Federa Republic of Germany The emergency action plan consists of three action programmes:
(A) a prophylactic programme becomes operative in the case of "exotic" FMD occurring in neighbouring countries;
(B) becomes operative in the case of "exotic" FMD occurring in the Federal Republic and action programme A is included;
(C) becomes operative in the case of an outbreak of "exotic" FMD in the Federal Republic if programme (A) or essential parts of programme (B) have not yet been concluded.

Netherlands The national policy is based on stamping out and ring vaccination; in case of an FMD outbreak of exotic type the same policy is used but in a more severe way. Ring vaccination is with homologous vaccine imported or produced locally. The vaccine also has to be produced when exotic FMD occurs in a neighbouring country. Coordination of prophylactic programmes is essential. Inactivated deep frozen antigen has to be stored as well as batches of BHK adapted seed virus cells against the most common types of exotic FMD virus.

Belgium The existing legislation provides for an emergency FMD situation.

France A complete plan for emergency FMD outbreaks has been elaborated by the Veterinary Services.

Switzerland A proper national emergency plan does not exist. This is covered by the Federal legislation for epizootics.

Italy In case of FMD outbreaks of conventional or exotic FMD virus emergency action is provided for under the respective veterinary regulations.

Spain The national plan is based on stamping out and strict sanitary measures and vaccination with homologous vaccine.

Turkey The national regulations in force apply also in the case of an exotic FMD epidemic.

Cyprus In case of an exotic FMD outbreak a national emergency plan would be applied.

* Poland The national emergency programme for FMD outbreaks provides for the stamping-out policy. The CMEA countries have at their disposal a common reserve of type ASIA-1 vaccine.

* Austria The national emergency plan includes stamping out and ring vaccination; a stock of FMD vaccine against OAC virus types (250 000 doses) is held.

Bulgaria The national emergency plan is determined by Government legislation.

Yugoslavia The national emergency plan is established under Government regulations.

* United Kingdom The national emergency plan for FMD outbreaks especially of an exotic type provides for stamping out and strict sanitary measures. In case of a strong possibility of considerable spread, the Chief Veterinary Officer might, based on assessment of all the factors concerned, recommend to the Minister that a policy of ring vaccination be adopted. For this purpose a bank of 3 million doses (1 million each of types A, C, O) is maintained in cold storage in U.K. In the case of an exotic type of virus and use of the revaccination policy, the relevant type of vaccine would have to be imported.

* Denmark The national emergency plan provides for stamping out and strict sanitary measures without vaccination. A national stock of vaccine for an emergency situation is produced at the State Veterinary Virus Research Institute, Lindholm. The stock consists of 300 000 doses of types A, O and C vaccine ready for use and one million doses each of A, O and C types kept as deep frozen antigen.

Norway The national emergency plan is based on stamping out and ring vaccination is used only in very special cases.

* Sweden The plan for the control of FMD is based on a law promulgated by Parliament and revised in 1980. The main feature of the policy used is stamping out and ring vaccination. There is an agreement with Denmark that 3 x 20 000 doses of FMD vaccine types A₁, A₅ and C₁ are always at the disposal of Sweden. 3 x 5 000 doses of the same vaccine are kept in the country for emergency use.

* Finland The national plan is based on stamping out and in special cases ring vaccination. Vaccine stock at the National Veterinary Institute (4 000 doses) and at Medical Firm 26 000 doses.

Iceland National plan - stamping out; vaccination taken into consideration only in exceptional circumstances.

Luxembourg The emergency plan is based on the EEC policy.

Ireland The national plan is based on stamping out and strict sanitary measures.

Trust Fund No. 9042.00 NFT/INT/011/MUL - International European Commission for
the Control of Foot and Mouth Disease

A.

Pledge Position as at 31 December 1983 (f i n a l)
(expressed in U.S. Dollars)

	Outstanding 1980	Outstanding 1981	Contributions due for 1982	Contributions due for 1983	Rec'd During 1983	Outstanding as at 31.12.83
Govt. of Austria	-	-	-	4,270.96	4,270.96	-
" " Belgium	-	-	-	7,118.28	-	7,118.28
" " Bulgaria	-	-	(2,135.48)	2,135.48	-	-
" " Cyprus	-	-	-	711.82	711.82	-
" " Denmark	-	-	-	7,118.28	7,118.28	-
" " Finland	-	-	-	4,270.96	4,270.96	-
" " Germany	-	-	-	14,236.56	14,236.56	-
" " Greece	-	-	-	2,135.48	2,135.48	-
" " Hungary	-	-	-	4,270.96	-	4,270.96
" " Iceland	-	-	-	711.82	711.82	-
" " Ireland	-	-	-	2,135.48	2,135.48	-
" " Italy	-	-	-	14,236.56	16,049.38	(1,812.82)
" " Luxembourg	-	-	-	711.82	711.82	-
" " Malta	-	-	-	711.82	711.82	-
" " Netherlands	-	-	-	7,118.28	7,118.28	-
" " Norway	-	-	-	2,135.48	2,135.48	-
" " Portugal	-	-	-	2,135.48	2,135.48	-
" " Spain	-	-	-	7,118.28	-	7,118.28
" " Sweden	-	-	-	7,118.28	7,118.28	-
" " Switzerland	-	-	-	7,118.28	7,118.28	-
" " Turkey	-	3,042.00	3,954.60	4,270.96	7,908.14	3,359.42
" " United Kingdom	-	-	-	19,931.18	19,931.18	-
" " Yugoslavia	-	-	-	4,270.96	4,270.96	-
	-	3,042.00	1,819.12	125,993.46	110,800.46	20,054.12
	=====	=====	=====	=====	=====	=====



FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
European Commission for the Control of
Foot and Mouth Disease Trust Fund MTF/INT/O11/MUL (9042.00)

B.

Final Statement of Account as at 31 December 1983
(expressed in U.S. dollars)

Receipts

Balance as at 1 January 1983		30,378
Receipts as per attached list	110,800	
Interest credited (1983)	<u>4,066</u>	<u>114,866</u>
		145,244

Deduct:

Cash Expenditure 1983

Personal Services	99,510	
Travel on Official Business	12,826	
Contractual Services	2,000	
General Operating Expenses	803	
Supplies and Materials	-	
Acquisition of Furniture and Equipment	-	
Acquisition and Improvement of Premises	-	
Fellowships, Grants and Contributions	<u>-</u>	
	115,139	
Project Servicing Costs %	<u>-</u>	<u>115,139</u>
Balance as at 31 December 1983		<u>30,105</u> =====

EUROPEAN COMMISSION FOR THE CONTROL OF FOOT-AND-MOUTH DISEASE

	<u>Approved budget 1983</u>	<u>Actual expenditure 1983</u>	<u>Provisional budget 1984</u>
	US\$	US\$	US\$
<u>GENERAL ACCOUNT</u>			
<u>Application of resources</u>			
.10 <u>Personal services</u>			
1 P5 Animal Health Officer)			
1 G6 Administrative Assistant)	106 500	99 510 ^{1/}	95 000
Temporary assistance for meetings)			
including interpreters)			
.20 <u>Travel - Secretariat and Chairman and</u> <u>Rapporteur for Twenty-fifth Session</u>	12 000	7 221	12 000
.30 <u>Contractual services - World Reference Laboratory</u>	2 000	2 000	5 000
.40 <u>General Operating Expenses (Hospitality/misc.)</u>	1 500 ^{2/}	803	700
.50 <u>Emergency Expenditure</u> (Special Functions, Article V of the Constitution) 10 000	10 000	-	20 000
1/ Temp. assistance represents	132 000	109 534	132 700
US\$ 10 225 of this amount	=====	=====	=====
2/ For year in which Sessions is held -			
otherwise US\$ 700			
<u>SPECIAL ACCOUNT</u>			
.20 <u>Travel of Research Group</u>	10 000	5 605	8 000
.30 <u>Contractual services for WRL in relation</u> <u>to Collaborative Laboratory Study</u>	6 000	-	5 000
.80 <u>Fellowships</u>	-	-	5 000
	16 000	5 605	18 000
	=====	=====	=====
<u>INCOME</u>			
Balance at 31.12.83	US\$ 30 105	US\$ 146 700	
Pledges 1984	US\$ 153 043	US\$ 36 448	
(including France and Poland)	183 148	183 148	
	=====	=====	
Prov. Budget 1984	US\$ 146 700		
Unallocated balance	US\$ 36 448		
	183 148		
	=====		

D.

EUROPEAN COMMISSION FOR THE CONTROL OF FOOT-AND-MOUTH DISEASE
Administrative Budget for 1984 - TF 9042

	US\$	US\$
.10 <u>Personal Services</u>		
01. P5 Animal Health Officer x 12 months	67 000	
G6 Administrative Assistant x 12 months	25 000	
05. Overtime	<u>1 500</u>	93 500
.14 <u>Home leave</u>		
Administrative Assistant - biennial entitlement		1 500
.20 <u>Travel</u>		
Secretariat and Chairman		12 000
.30 <u>Contractual Services</u>		
.39 Services to be rendered by WRL in 1984		5 000
.40 <u>General Operating Expenses</u>		
.45 Hospitality	500	
.49 Miscellaneous	<u>200</u>	700
.50 <u>Supplies and Materials</u>		
(Special Functions/Article V of the Constitution)		<u>20 000</u>
		<u>132 700</u>
Annual income from pledges - 1984 ^{1/}	US\$ 153 043	
Balance at 31.12.83	<u>30 105</u>	
	<u>183 148</u>	Balance - <u>50 448</u>

SPECIAL ACCOUNT

	US\$
.20 <u>Travel</u>	
Research Group	8 000
.30 <u>Contractual Services</u>	
(WRL in connection with Laboratory Study)	5 000
.80 <u>Fellowships</u>	<u>5 000</u>
	18 000
	<u>32 448</u>
Uncommitted balance 1984	<u>50 448</u>

<u>1/</u> Previous income US\$	125 993 46
France 1984	19 931 18
Poland	7 118 28
	<u>153 042 92</u>