

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

REPORT OF THE

**Held in Torremolinos
23-26 January 1979**

**FORTY-FIRST 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

TABLE OF CONTENTS

	Page
INTRODUCTION.....	1
1. Adoption of Agenda.....	2
2. FMD position and campaigns in Europe during the last biennium.....	2
3. Position and campaigns of FMD in southeastern Europe and Anatolia.....	5
4. FMD situation in North Africa, Near East and other regions of particular interest to Europe.....	8
5. Position of SVD in Europe.....	8
6. Review of problems related to:	
a) identification of new strains of FMD virus and relevant diagnostic facilities	8
b) production of vaccines against FMD types and sub-types not present in Europe.....	9
7 Report on the Commission's activities during the biennium (including Research Group).....	9
8. Future activities and proposals concerning competence and role of the Commission.....	10
9. Financial report - approval of budgets.....	10
10. Any other business.....	10

Table I	Outbreaks of foot-and-mouth disease and virus types recorded in Europe, the Near East and Northern Africa during 1977.....	11
Table II	Outbreaks of foot-and-mouth disease and virus types recorded in Europe, the Near East and Northern Africa during 1978.....	14
Table II (a)	FMD statistics for Europe from 1965 to 1978.....	17
Table II (b)	World Reference Laboratory for foot-and-mouth disease Cumulative Report for 1978.....	18
Table III	Monthly Distribution of FMD outbreaks in 1976-1978.....	19
Appendix I	The Animal Virus Research Institute Notes on examination of strains from Yugoslavia and Malta 1978..	20
Appendix II	FAO Vaccine virus stocks at 9.1.79.....	21
Appendix III	Trust Fund 9042 - Revised Provisional Budget for 1979.....	22

INTRODUCTION

The 41st Session of the Executive Committee of the European Commission for the Control of Foot-and-Mouth Disease was held at the Palacio de los Congresos y Exposiciones, Torremolinos, Spain, from 23 to 26 January 1979.

Present:

<u>Executive Committee</u>	Dr. A.C.L. Brown, United Kingdom	Chairman
	Dr. R. Vollan, Norway	Vice-Chairman
	Dr. M. Bugarski, Yugoslavia	
	Dr. M. Bügü, Turkey	
	Dr. M. Nazlioglu, Turkey	
	Dr. P.N. Dragonas, Greece	
	Dr. F. Walla, Austria	
	Dr. J.G. van Bekkum, Netherlands	Chairman, Research Group
<u>Secretariat</u>	Dr. P. Stouraitis	
	Secretary, European Commission for the Control of FMD	
	Miss J. Raftery	
	Administrative Assistant, European Commission for the Control of FMD	
<u>FAO</u>	Dr. R.B. Griffiths	
	Chief, Animal Health Service, FAO, Rome	
	Dr. G.M. Boldrini	
	former Secretary of the European Commission for the Control of FMD	
<u>Observers</u>	Dr. J. Paniagua Arellano	
	Sub-director General de Sanidad Animal	
	Dr. Rafael Campos Oñetti	
	Jefe del Negociado de Fiebre Aftosa	
	Dr. Francisco Jesus Merchan	
	Jefe del Servicio de Inspección Veterinaria	
	Dr. José Garcia Gonzalez	
	Investigador, Inst. Nacional Investigaciones Agrarias	
	Dr. J. Nombela	
	Sanidad Exterior y Convenios Internacionales Zoonosarios	
	Dr. Julián Martinez Delicado	
	Inspector Veterinario Jefe Provincial de Producción Animal, Malaga	
	Dr. Leonardo Ardoy	
	Inspector Regional de Sanidad Animal, Granada	
	Dr. José Martin Rodriguez	
	Nefe del Negociado de Sanidad Animal de Malaga	
	Dr. Baldomero Rodriguez	
	Veterinario de la Inspección Regional de Sanidad Animal, Granada	

Dr. A.C.L. Brown in opening the meeting paid tribute to the hospitality of the Spanish authorities who had very kindly offered to host the meeting and had provided such excellent conference facilities. He informed the meeting that Professor Eokerskorn was unable to attend for health reasons and Professor Bellani had been prevented from coming due to unforeseen circumstances. The Chairman then congratulated Spain on becoming a member of the Commission and on behalf of the members as a whole wished the Spanish authorities many years of fruitful membership. He then invited Dr. J. Paniagua Arellano, Sub-director General de Sanidad Animal to address the Group. On behalf of the Minister for Agriculture, and of Dr. José Garcia Ferrero, Director-General, Producción Agraria, Dr. Paniagua welcomed the delegates and informed them that Spain had become a member of the Commission as of 20 December 1978. He wished the Group a successful meeting.

Dr. G.M. Boldrini, former Secretary of the Commission, said that he felt very proud to be present on this important occasion. He stated that during his long term of office with the Commission he had had numerous opportunities to appreciate the collaboration of the Spanish veterinary authorities who although not formally members of the Commission had always demonstrated keen interest in its activities and had done everything possible to further its work in the field of foot-and-mouth disease control.

1. Adoption of Agenda

The Chairman then proposed the following agenda:

1. Adoption of Agenda
2. FMD position and campaigns in Europe during the last biennium
3. Position and campaigns of FMD in southeastern Europe and Anatolia
4. FMD situation in North Africa, Near East and other regions of particular interest to Europe
5. Position of SVD in Europe
6. Review of problems related to:
 - a) identification of new strains of FMD virus and relevant diagnostic facilities
 - b) production of vaccines against FMD types and sub-types not present in Europe
7. Report on the Commission's activities during the biennium (including Research Group)
8. Future activities and proposals concerning competence and role of the Commission
9. Financial report - approval of budgets
10. Any other business

The Agenda was adopted as proposed.

The Secretary presented the working paper "Position of FMD (and SVD) in Europe during the biennium: Campaigns in southeastern Europe and Anatolia" which covered items 2, 3, 4 and 5 of the Agenda.

2. Disease position in Europe and related activities of the secretariat

2.1 At the meeting of the Executive Committee held at FAO Headquarters in February 1978, the evolution of FMD in 1977 was described (Table I). In 1978 the FMD situation in Europe was further improved (Table II). The disease has occurred in only a few countries and only sporadic foci had been reported. The position of those countries having disease on record since the last Session (February 1978) was then examined.

Italy The disease incidence in 1978 was higher than in 1977 but the sporadic outbreaks which occurred were brought rapidly under control. Type C was dominant and an outbreak of

type A was found to be similar to A Sicily 1977. In November 1977, type O₁ appeared in Sicily in cattle, pigs and goats and caused 9 outbreaks on the whole island. The disease occurred in mild clinical form and its origin remained unknown. The Italian veterinary services have since informed the Secretary that the disease is under control and strict sanitary measures and general vaccination were applied to susceptible animals.

The virus isolated from pig bone marrow imported from Brazil and designated as A/Italy/1/78 by the World Reference Laboratory was found to be rather distant from the present S.American A strain. This does not change the origin of the virus since it had been isolated from meat imported from S. America.

Malta After three years of freedom from FMD, 14 outbreaks occurred in cattle farms near the Luqa airport in 1978. The virus has been typed by the W.R.L. Pirbright, as type A, close to A5. Stamping out of 403 cattle and 266 small ruminants has been carried out and mass vaccination with trivalent vaccine A5/01/C of all the susceptible animals in the country has been applied.

The vaccine was procured with European Commission funds (TF 9042) with the collaboration of the Italian Government. 13,000 doses of vaccine were dispatched from the Padova FMD Institute to Malta in addition to 5,000 doses which the Government of Malta bought from Wellcome (Germany). The Secretary visited Malta and advised on the emergency action and measures to be taken pending arrival of the vaccine. Dr. Boldrini, the former Secretary of the European Commission, was appointed to assist the Maltese Government in dealing with outbreaks and to supervise the vaccination campaign. In addition to the first vaccination, the animals received a second vaccination with the same vaccine A5/01/C (25,000 doses provided by the European Commission also under TF 9042).

Since the last outbreak in December 1978, no further cases have been reported. The disease was introduced into the country in all likelihood with imported cattle from Hungary through Yugoslavia, as Dr. Boldrini stated in his report; and this was clearly supported by the results given by the WRL in which it was shown that the two A virus strains isolated in the case of both Yugoslavia and Malta are identical or very closely related (See Appendix I). Hungary has repeatedly stated that FMD has not occurred in the country.

The Chairman thanked the Italian veterinary authorities for their prompt assistance in supplying vaccine to Malta. He then asked members of the Group to endorse the action taken by the Chairman, Vice-Chairmen, and Secretary to meet the emergency situation in Malta. The Committee unanimously approved this action.

Yugoslavia Details were furnished by Dr. Bugarski on the outbreak which was detected in the port of Ploce among animals from Hungary in transit through Yugoslavia. Information on the outbreak, which had been noted on 18 November 1978, was despatched to the veterinary authorities of neighbouring countries, to OIE, and to the European Commission for the Control of Foot-and-Mouth Disease on 22 November. This was the first outbreak in the country since September 1974. A total of 1,497 cattle and 903 sheep were involved. The animals were being shipped to various countries in North Africa. The virus type, identified as A5, was later confirmed by the W.R.L. All necessary veterinary measures were taken i.e. cordoning off of the outbreak area and the town of Ploce, observation of all susceptible animals en route from the border area of Kotoriba to the port of Ploce as well as susceptible animals in the districts of the Hungarian/Yugoslav border, those of the port area, and neighbouring districts. Import restrictions were imposed on meat and meat products originating in Hungary with the exception of tinned meat and strict stamping out measures and burial of all carcasses were carried out. In all 1,497 cattle and 903 sheep were slaughtered. Prophylactic measures were applied to all cattle, sheep and goats in the communes of the frontier areas (Slovenia and Croatia) and in the commune of Ploce and the surrounding area. A total of 220,000 cattle and 12,000 sheep and goats were vaccinated with trivalent vaccine and disinfection of infected premises was undertaken. Due to these measures there were no further outbreaks. Dr. Bugarski wished to thank the veterinary authorities of neighbouring countries for their interest during the outbreak.

The Federal Republic of Germany, France and Switzerland The outbreaks related to type C in the three countries are considered to be of indigenous origin and the strict control measures applied have brought the FMD situation in the affected countries back to normal.

German Democratic Republic Late in 1978, virus type C made its appearance.

U.S.S.R. Reported that there were outbreaks due to C after a lapse of many years (1970)

Spain In describing the present FMD situation in Spain, Dr. Campos stated that there has been FMD in Spain since 1963 and a peak was reached in 1964 followed by a brief down-turn and a new up-swing in the period 1968-1973. From then on the intensity decreased again until 1977 and the last case was reported in July of that year. The country has been disease free since that time. Annual compulsory vaccination campaigns began in 1969 and were continued until 1975 on the following pattern:

- a) compulsory vaccination twice yearly of all cattle over four months of age
- b) compulsory vaccination of sheep and goats moving from one production area to another
- c) compulsory vaccination of pigs being moved from one production area to another
- d) compulsory vaccination of breeding sows and boars

In the case of ruminants, vaccines have been supplied free of charge. In the case of pigs vaccine has been supplied free of charge in some years, while in others only up to 50% of supplies were free of charge. These were used to cover breeding animals.

This same system has been continued from 1975 onwards with one change only, namely that cattle vaccination takes place only once yearly, except in the provinces on the French and Portuguese borders where it is still compulsory every six months.

This policy made it possible to keep reducing the incidence of the disease year by year but a marked drop was recorded only in 1972 when a special oil adjuvant vaccine for pig vaccination was made available by Spanish vaccine production units. The use of this vaccine increased every year and there was a corresponding decrease in the number of outbreaks. At the present time, oil vaccine is being used on a routine basis as in d) above. Additionally many breeders resort to its wider use of their own accord. In consequence residual foci in the pig population have disappeared entirely, and the epizootic can be regarded as eradicated. This highlights the importance of including pig vaccination in eradication campaigns. In view of the fact that the country has been disease free for two years, the Spanish Government is at present considering the possibility (although no firm decision has yet been taken) of discontinuing the policy of annual mass vaccination, and replacing it by general prophylactic measures, stamping out, and ring vaccination, if and when outbreaks occur.

Greece Dr. Dragonas stated that the last outbreak was reported in October 1977 in pigs in the province of Agrinio, Etoloakarnanias in mainland Greece. Of the 200 animals in the piggery, 150 were affected. All animals were slaughtered and destroyed on the spot. As regards the type of A virus which had caused the last two outbreaks (August and October 1977), initial serological studies carried out at the Greek FMD Institute showed that it differed from A22 and A5. The A Platy/77 strain had been compared with A Megara/76 which had caused an outbreak of FMD in June 1976, and it had been found that a very close serological relationship existed between them (R=87). These two strains had been sent to the W.R.L. which carried out a joint study with the Pan American Center on a number of A strains which had caused FMD outbreaks in Europe, North Africa and South America during 1976 and 1977. This study showed a strong inter-relationship between the strains despite the fact that they were found not to be identical. The strictly applied meat importation rules (boneless meat) on meat from S. America have helped to keep the country free from FMD since 1977.

Prophylactic schemes in 1978 The Secretary informed the Committee that there has been no change in the programme carried out in 1977 with the exception of increased vaccination coverage in Romania, Hungary and Czechoslovakia.

3. Position of FMD in Turkey and campaigns in southeastern Europe and Anatolia
In Turkey the FMD situation has been more critical during the past year. Thrace, after more than four years' freedom from the disease, has been infected with O type. From January to December 1978, 30 outbreaks of FMD type O occurred in the area in which vaccination campaigns have been systematically carried out every year. No cases of A22 have been reported in Thrace. In Anatolia both virus O and A22 were present. During 1978 a total of 710 outbreaks were reported in which type O virus has been prevalent. (Table III)

Diagnostic activities Type identification was actively carried out at the Ankara FMD Institute as shown by 1323 specimens which were examined during the year. Of this number 756 were found to be type O and 376 were type A22. Since the disease has occurred generally in mild clinical form it has not been possible in many cases to collect samples for typing. According to the W.R.L. serological investigations the type O virus present in Thrace and in other parts of Turkey is little distant from O₁ BFS 1860 - European strain (O₁ Lausanne) and the difference is not great enough to rule out the use of a high potency O₁ BFS 1860 vaccine. This information is of great importance for European countries but the problem of the antigenic relationship between the O Manisa strain and possibly other O strains intended against the European O₁ strain is still not clear since the number of FMD outbreaks with type O virus has increased in vaccinated animals which were supposed to be protected. The Committee is very concerned about this problem, all the more so since the latest immunological results provided by IFFA, Lyons, on vaccinated cattle with O₁ European strain and challenged with O Manisa Turkish strain have not been satisfactory. It is not yet established that the O₁ Manisa strain is identical with the current field strain.

Vaccination campaigns The maintenance of the buffer zone in Thrace was carried out during the spring period. According to reports received from the countries concerned, the frontier areas of Turkey with Greece and Bulgaria received vaccination coverage during May and June. Early in 1978, bivalent FMD vaccine A22/O₁ was furnished by FAO to the three countries concerned as follows:

Turkey	400,000 doses plus a follow-up delivery of 200,000 doses of O ₁ (Brescia production) in October
Bulgaria	180,000 doses
Greece	120,000 doses

The following vaccinations were carried out in Turkey during the year: Thrace buffer zone - cattle 309,290, sheep and goats 918,143, Anatolia cattle 983,508, sheep and goats 973,395.^{1/}

Provision for the maintenance of buffer zones in 1979 The Secretary reported that following the provision of vaccine for the buffer zone in Thrace in 1978, the campaign funds have been practically exhausted.

From the balance of the FAO/TF 9111 (EEC) an emergency supply of 200,000 doses of type O vaccine have been made available to Turkey in October 1978.

The Executive Committee was informed on the future financial status of the campaigns at its 40th Session in February 1978 and at this Session it was recommended that maintenance of the buffer zones be continued. In addition, on the occasion of a meeting held in Paris on 25 May 1978, and in Brussels on 16 June, the FAO/EEC/OIE Tripartite Committee was briefed

^{1/} The vaccine produced at Ankara during the year amounted to 2,175,000 doses of monovalent of which 1,350,000 doses were of O type and 825,000 were A22.

by FAO on the financial status of the campaign funds and it was agreed that additional funding up to an amount of US\$ 1,200,000 would be necessary to assure the continuation of the campaigns until 1983. Following this an appeal letter has been sent to EEC and non-EEC countries requesting funds for this purpose. Austria and Norway reacted positively to this appeal and have already deposited contributions in the relevant Trust Fund (9097).

The Secretary reported that the appeal has been favourably considered by EEC and is being submitted for approval to the Council of Ministers. He was informed verbally that a certain sum would be made available from EEC early in 1979 to be used for the supply of vaccine in time for the vaccination campaigns in spring.

On the basis of the request made by the veterinary services of the three countries involved in the maintenance of the buffer zone in Thrace, the Secretary estimated that an amount of 700,000 doses of O₁/A22 bivalent FMD vaccine at a cost of approximately US\$ 300,000 will be needed for the next spring campaign in the Thrace buffer zone to be distributed as follows:

Turkey	450,000	doses
Bulgaria	200,000	"
Greece	50,000	"

Priority should be given to Turkey and Bulgaria.

The Turkish Delegate expressed the appreciation of his Government to FAO for the assistance given for the maintenance of the buffer zones and to the Commission for its technical assistance to Ankara FMD Institute.

The Committee examined reported failures of vaccines containing the O₁ Lausanne strain and O₁ Manisa strain to protect cattle in Turkish Thrace against FMD. There was some evidence for an antigenically distinct O strain being present in Turkey. In recent experiments conducted by IFFA, it was shown that out of 5 cattle vaccinated with a single full dose of O₁ Lausanne strain vaccine, and subsequently challenged with the Turkish O Manisa strain (identified in 1969) only three were protected. This finding confirmed earlier laboratory studies in Turkey with O₁ Brescia vaccine. Taking into account that the O₁ Lausanne strain vaccine had previously protected Turkish cattle against the O virus, the evidence presented suggested that there was an "antigenic drift" in the O virus in Turkey.

The Committee decided that a substantial research study based on challenge of vaccinated animals was required, with the possibility that a new "seed" strain would need to be isolated for the purpose of vaccine production. However, this would take time and it was considered impossible to conclude investigations before the start of the Spring campaign of 1979. The question therefore arose as to the immediate action to be undertaken.

In this connection, it was important to note from field experience that double vaccination at an interval of approximately two weeks either with O₁ Lausanne or with O Manisa gave adequate protection against the uncharacterized local strain. Accordingly it was decided to accept a proposal from the delegation of Turkey that the 1979 Spring campaign programme in Turkish Thrace should be conducted as follows:

- i) Initial vaccination in the frontier areas for a depth of 10 km with O Manisa strain vaccine produced at the Sap Institute, Ankara, up to 300,000 doses.
- ii) Follow-up vaccination with bivalent O₁ Lausanne/A22 vaccine to be supplied by FAO through the European Commission for FMD, subject to funds becoming available by April 1979.

The delegation of Turkey informed the Committee that samples of a virus recovered

from O₁ Lausanne vaccination breakdown cases at Çanakkale, Thrace, and tentatively named O₁ Çanakkale 1978 had been sent to the W.R.L., Pirbright, for investigation. As no challenge experiments had been conducted in Turkey with this virus, it was considered important to undertake a trial at the Sap Institute, Ankara, immediately in order to determine whether or not a potent O₁ Manisa vaccine could protect against O₁ Çanakkale 1978. While such a trial could probably not be completed in time to influence the vaccination policy for the 1979 Spring campaign, its results would be important relative to the 1979 Autumn campaign. If O₁ Manisa vaccine failed to protect the challenged animals then it was imperative to produce a vaccine containing the homologous O₁ local strain for future campaigns.

Infrastructure and assistance to FMD laboratories in southeastern Europe

The main points of the report to the Committee were:

In Turkey the new FMD laboratory is under construction and will require at least two years to be completed with the equipment and become operational. This depends mainly on the assistance which Turkey has requested from EEC and other sources.

The present FMD laboratory owing to problems with the water used for cell growth media has considerably reduced vaccine production in cell suspension. The Secretary informed the Committee that the European Commission assisted through providing an expert in tissue culture from A.V.R.I., Pirbright, who has spent three weeks in Ankara investigating the problem. The very useful contribution of the Padova Institute through bilateral assistance is also acknowledged.

Dr. Blügl stated that for an effective campaign against FMD in Turkey there is a great need for vaccine production. Taking this into consideration, the Turkish Government has prepared and put into practice an expansion project for the Ankara FMD Institute in order to increase vaccine production. Within the framework of this project it is assumed that the new vaccine production unit will go into operation at the end of 1981. Assistance has been requested from EEC to provide the necessary equipment and supplies which must be imported from Europe to equip the new laboratories.

US\$ 3,000,000 has been requested from EEC and of this amount \$ 1,000,000 has already been deposited with the Government. From this four pieces of essential equipment will be purchased. However ever increasing inflation over the past few years and the addition of a few items of equipment to the list which had been omitted earlier make it necessary to request that the balance of \$ 2,000,000 to be provided by EEC be increased to US\$ 3,600,000. An approach has been made in this respect in October 1977.

In Greece the FMD laboratory has increased its vaccine production capacity by using the 100 litre fermentor for cell production in suspension. The Commission contributed to this effort by providing some essential items of equipment and two fellowships for a total period of four months have been provided at the Institutes of Brescia and Padova for training and refresher work in the field of FMD. Dr. Dragonas thanked the Committee for its interest and valuable assistance.

In Bulgaria the FMD laboratory is now operational as a pilot unit using BHK cell growth in suspension and monolayer (rolling bottle). An amount of 600,000 doses of monovalent vaccine O₁ has been produced in 1978 and was used for vaccination other than in the buffer zone. Two 200-litre fermentors for cell growth in suspension were delivered and installed at the FMD Institute.

The Commission contributed to this development by providing specialist missions from the Brescia Institute and technical assistance by the Secretary. Further assistance has been received through the UNDP project (BUL/77/011) which has now become operational and a plan for the new FMD center is under preparation. The Secretary of the European Commission is the Chief Technical Adviser to this project.

4. FMD situation in North Africa, Near East and other regions of particular interest to Europe

Morocco Following invasion by FMD A virus in 1977 and the mass vaccination campaigns with homologous vaccine, the disease is now under control. An additional consignment of one million doses of A Morocco vaccine was provided by FAO under TCP project in 1978. The technical assistance missions included in the project have been provided through the services of Professor Panina from Brescia and Dr. Stouraitis. The Secretary reported that no decision has been taken yet by the Government of Morocco about the establishment of a new FMD Institute.

In Algeria with the assistance of a TCP project one million doses of vaccine have been delivered but it has not been possible to obtain further information regarding the FMD situation in the country.

In Egypt further assistance was provided by an FAO TCP project for the implementation of the programme for vaccine production in the FMD laboratory in Cairo. Equipment has been delivered to complete the existing pilot unit at a total cost of US\$ 56,000. Two fellowships have been granted in FMD laboratory techniques at the Institutes of Tübingen and Pirbright and a short-term consultancy has been provided by Professor Zoletto from Padova Institute which has accepted to assist the Cairo FMD laboratory to overcome its technical problems. With a view to having a free flow of information, it was recommended that every effort be made to establish closer links with the authorities in North Africa and also with those countries in eastern Europe which are not members of the Commission.

5. Position of SVD in Europe The situation of SVD during the biennium in Europe was reported by the Secretary. In 1978, the U.K. has been in a very favourable position as compared with the previous years with no outbreaks reported. In Italy the SVD remained endemic and 18 foci were notified in the period January to April. One foci was recorded in the Federal Republic of Germany and one in Austria. Both countries are again disease free.

The Chairman pointed out that countries where more than two distinct foci of infection have occurred must not claim freedom without the evidence of statistically significant serological surveys. There were growing problems concerning claims for freedom from particular diseases and this required international consideration.

6. Review of problems related to:

- a) identification of new strains of FMD virus and relevant diagnostic problems
- b) production of vaccines against FMD types and sub-types not present in Europe

A brief account of the above-mentioned problems as well as of main relevant activities of the Commission since its early years of operation is contained in the relevant working paper.

Section a) The role played by the W.R.L. through the years in the development of diagnostic services and facilities in Europe was warmly recognized by the Committee. Particular emphasis was placed on the more recent contributions of the W.R.L. to the joint inter-laboratory study which is being carried out under the sponsorship of the Commission in order to reach the highest possible uniformity both in the execution and interpretation of the testing techniques currently applied in the FMD laboratories of 20 countries including the USA and the Pan American FMD Center. The distribution, collection and analysis of material has entailed considerable work at Pirbright and this will be the position for some years ahead.

Comments were made on the problems encountered by laboratories due to the impossibility of working with exotic viruses when this is required to identify a new virus in a country. The Chairman of the Research Group explained that the distribution of inactivated antigens as suggested by the Group to allow for in-depth investigation of methods is a problem by itself because of the little experience so far gained in this field.

The problem as to whether national institutes, well known for their organization and

disease security systems should be allowed to hold exotic viruses for diagnostic purposes was also debated but no firm proposal could be made as to possible concessions in this complex issue. The Chairman expressed the opinion that the subject should be retained on the agenda of the Commission's next Session because special conditions might be found which would allow for the handling of exotic viruses purely for exceptional diagnostic purposes. He requested the Chairman of the Research Group to take a closer look at security measures. He agreed that whatever might be proposed, the final decision as to the holding of exotic viruses will rest with the national veterinary services.

Section b) The Chairman expressed appreciation for the very informative review of the steps taken by FAO and the Commission in the course of the years to provide in case of emergency, member countries with supplies of exotic vaccines. He emphasized that in view of the increasing demand in the developing countries, a very serious global deficit of exotic vaccines would result should Wellcome suspend production in the U.K. The problem of seed virus stocks and a vaccine reserve was then discussed. Concerning seed viruses, it was agreed that the maintenance of virus stocks should continue to receive support and confidence also because at present there is no cheaper alternative solution. Research is under way Dr. van Bekkum said to explore possibilities to keep concentrated antigen practically indefinitely in storage at a very low temperature. (Appendix II)

The Chairman drew attention to the contacts so far had both in America and Europe with a view to exploring concrete possibilities for the establishment of a strategic reserve of vaccine. He stated that a bank of vaccines based on a fairly wide range of vaccine types and sub-types capable of conferring good immunity at the first injection would constitute a safeguard for a number of countries including those which apply vaccination already with classical strains. Countries already carrying out vaccination would obviously only be entitled to the component of the reserve which is exotic for them. Invited to speak on the subject, Dr. Boldrini expressed his full support of the Chairman's views and summarized the principles which should govern the maintenance of a strategic reserve. In his opinion, the vaccine bank would better serve its purpose by combining the operation of piling up vaccines with an organized programme of technical assistance to countries seriously engaged in FMD control.

The Chairman and the Chief of the Animal Health Service of FAO agreed that FAO would be the best location for the operation of this programme because of its infrastructure throughout the world.

It was finally agreed that the draft project of the vaccine bank which has already been supported in principle by FAO should be circulated at the next session of the European Commission in order to have a preliminary discussion on its merits.

7. Report on the Commission's activities during the biennium (including Research Group)

The Secretary drew the Committee's attention to the relevant report. Sections 1, 2 and 4 were reviewed and approved by the Executive Committee.

The Chairman invited Dr. van Bekkum, Chairman of the Research Group of the Commission, to comment on Section 3 - Conclusions and recommendations of meetings of the Research Group. Dr. van Bekkum informed the Committee on the activities of the Research Group, making particular reference to the meeting held at Uccle, Belgium, in June 1978, and the joint inter-laboratory study (now in its third phase). He concluded his presentation by making reference to his participation as representative of the Commission at the meeting of the Committee on Nomenclature of Types and Sub-types of FMD virus, established within the International Association for the Standardization of Biological Products (Chairman, Dr. Stellan, Lyons). He also drew the secretariat's attention to a number of minor amendments to be made in the text of the relevant working paper before submission to the full Session of the Commission in March.

8. Future activities and proposals concerning competence and role of the Commission

Some general discussion took place on this point and the Chairman stated that he would like to see the Secretariat devote more attention to the eastern European countries, in particular to enlisting Albania, Poland and Czechoslovakia into the Commission. He added that he hoped the present currency difficulties which interfered with these countries becoming members of the Commission could be satisfactorily resolved in the near future. While the absence of France from membership was noted, the contribution of France to the work of the Commission was acknowledged.

In making reference to collaboration with the Pan American FMD center and to correspondence with Dr. Acha regarding the comments included in the report of the 40th Session, the Chairman said he would welcome an increase in the level of cooperation between the Pan American Center, the Commission and OIE.

9. Financial - approval of budgets

The secretariat reported on the financial situation of the Commission's Trust Fund 9042. The revised provisional budget for 1979 was approved as it stood. The Committee's attention was drawn to the breakdown of expenses for 1978. Dr. Boldrini gave some additional information on the Special Account of the Commission's budget. Detailed accounts for the past biennium will be submitted to the 23rd Session in March. (Appendix III)

10. Any other business

- (1) Article XII.1 of the Constitution of the European Commission for the Control of Foot-and-Mouth Disease

The Chairman recalled that at the 40th Session of the Commission's Executive Committee, FAO had drawn attention to a matter which had arisen in appointing a successor to Dr. Boldrini. This concerned the provision in Article XII.1 of the Commission's Constitution under which it is stated that the Commission's staff shall be appointed by the Director-General "with the approval of the Executive Committee". FAO had pointed out that the latter condition was at variance with provisions now existing in the FAO Constitution, in its General Rules and elsewhere in the Basic Texts, relating to the Director-General's prerogatives with respect to the appointment of FAO staff. FAO had therefore asked the Executive Committee to consider proposing to the Commission an amendment to Article XII.1. The Chairman reported that he had recently obtained a legal opinion in the U.K. which stated that there was no obligation on the part of the Commission to amend Article XII.1 but that any Member Country could propose an amendment which would require a two-thirds majority of the Members of the Commission for its adoption.

After some discussion, including comments on the FAO position made by Dr. Griffiths, it was decided that the subject should be raised at the next Session of the Commission in March 1979. The Chairman said that it would be useful if FAO could prepare a short note on the subject, summarising the FAO position, for distribution at the Session. He would then expect Members who wished to do so to discuss the issue with their own legal authorities and the matter could then be examined in more detail at a future meeting of the Executive Committee.

Before the meeting closed Dr. José García Ferrero addressed the Executive Committee. He spoke of the importance which was being attached to expanding livestock production in Spain at the present time. He said that it was a matter of great satisfaction to him that his country had become a member of the European Commission and he expected that Spain would play a significant part in the future activities of the Commission.

TABLE I

Outbreaks of foot-and-mouth disease and virus types recorded in Europe, the Near East and Northern Africa during 1977
(Dates in brackets relate to the last outbreak recorded)

EUROPE	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Iceland never had FMD												
Norway (1952) Sweden (1966) Finland (1959) Ireland (1941)												
Denmark (1970)												
U.K. Great Britain (1968) North. Ireland (1941) Jersey (1974)												
Belgium												
Netherlands Type:	1 A**											
Luxembourg (1963)												
France (January 1975)												
Fed. Republic of Germany Type:	1 A**		2 C									
Italy Type:					2 O	1 A**						15 A**C
Switzerland (March 1973)												
Austria (March 1975)												
Spain Type:	1 C	9 C	6 C	3 C	4 C		3 C					
Portugal (1971)												

See notes overleaf.

Table I (cont'd) 1977

EUROPE (cont'd)	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Czechoslovakia (May 1975)												
German Democratic Republic Type:												10
Poland (1971)												
Yugoslavia (September 1974)												
Hungary (November 1972)												
Romania (January 1973)												
Bulgaria (February 1973)												
Albania (1959)												
Malta (July 1975)												
Cyprus (1964)												
Greece								1		2		
								A**		A**		
Turkey (1)	60	51	68	73	90	107	64	64	54	45	37	22
Type:	0	0	0 A*	0 A*	0 A*	0 A*	0 A*	0 A*	0 A*	0 A*	0 A*	0 A*
U.S.S.R. (2)	14	12	10	10	9	12	12	11	5	6
Type:	0 A*	0 A*	0	0 A*	0 A*	0 A*	0 A*	0 A*	0 A*	0 A*	0 A*	...

Notes: A blank indicates no outbreak
 European/North-African group of Inter-related strains (W.R.L. December 1977)
 Subtypes: 0=0; A=A₅(A₇); A*=A₂₂; A**= South American/
 ... = no information

(1) Turkey: Last Asia₁ outbreak reported in September 1973.

(2) U.S.S.R.: The Soviet Republics of Lithuania, Lettonia and Estonia have been disease-free since 1966; Ukraine's last reported A₂₂ outbreak was in April 1973; Bielorussia had one A₂₂ outbreak in June 1974.

Table I (cont'd) 1977

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
NEAR EAST												
Jordan												
Lebanon												
Syria		2										
Iraq	5	7	6			3	1	2				
Iran		5	3	3	2	8	5	12	9	5		
		0	0	0	0	0	0	0	0	0		
Israel	-	-	-	-	-	-	-	-	-	-	-	-
NORTHERN AFRICA (1)												
Arab Republic of Egypt	2	-	1	-	1							
	0		0		0							
Tunisia	-	-	-	-	-	-	-	-	-	-	-	-
Algeria			12	11								
Morocco					25	3	4					

Notes: A blank indicates no information received

A dash indicates no outbreak

A* = A22

A** = South-American/European/North-African group of inter-related strains.

Types of virus: Asia1 last report from Iraq in July 1975. The World Reference Laboratory carried out typing on samples from the following countries: Iraq (O); Kuwait (A*); Yemen (A* and O); U.A. Emirates (A*); Algeria (A**); Morocco (A**). Typing was carried out locally in Israel, Iran and Egypt.

(1) No report from Lybia.

TABLE II

Outbreaks of foot-and-mouth disease and virus types recorded in Europe, the Near East and Northern Africa during 1978
 (Dates in brackets relate to the last outbreak recorded)

EUROPE	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Iceland never had FMD												
Norway (1952) Sweden (1966) Finland (1959) Ireland (1941)												
Denmark (1970)												
Great Britain (1968) U.K. North. Ireland (1941) Jersey (1974)												
Belgium												
Netherlands (Jan. 1977)												
Luxembourg (1963)												
France (January 1975) Type:				1 C								
Fed. Republic of Germany Type:			1 C	3 C								
Italy Type:	13 CA **		1 C	1 C	1 C						8 0	1 0
Switzerland (March 1973) Type:			1 C									
Austria (March 1975)												
Spain												
Portugal (1971)												

See notes overleaf.

Table II (cont'd) 1978

EUROPE (cont'd)	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Czechoslovakia (May 1975)												
German Democratic Republic Type:												1 C
Poland (1971)												
Yugoslavia Type:											1 A	
Hungary (November 1972)												
Romania (January 1973)												
Bulgaria (February 1973)												
Albania (1959)												
Malta Type:											6 A	8 A
Cyprus (1964)												
Greece (Sept. 1977)												
Turkey (1) Type:	26 O A* O A*	32 O A* O A*	30 O A* O A*	23 O A* O A*	60 O A* O A*	104 O A* O A*	112 O A* O A*	127 O A* O A*	125 O A* O A*	104 O A* O A*	65 O A* O A*	22 O A* O A*
U.S.S.R. (2) Type:	5 O A* O A*	2 O A* O A*	3 O A* O A*	2 C A* C A*	6 C O C O	4 O A* O A*	4 O	2 O			1 C	1 C

Notes: A blank indicates no outbreak
 European/North-African group of inter-related strains (W.R.L. December 1977)
 ...no information
 Subtypes: O=O₁; A=4(A₇); A*=A₂₂; A**= South American/

- (1) Turkey: Last Asian outbreak reported in September 1973.
- (2) U.S.S.R.: The Soviet Republics of Lithuania, Lettonia and Estonia have been disease-free since 1966; Ukraine's last reported A22 outbreak was in April 1973; Bielorrussia had one A22 outbreak in June 1974.

Table II (cont'd) 1978

NEAR EAST	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Jordan	4	1	1				1	1	1			
Type:	0	0	A*				0	0	0			
Lebanon				1								
Type:				A**								
Syria									1			
Type:									0			
Iraq	2	1	4		11	44	20	13		5		
Iran	5	8	4	4	5	11						
Type:	0	0	0	0	0	0						
Israel	-	-	-	1	-	-	-	1	-	-	-	-
Type:				A**				A**				
NORTHERN AFRICA (1)												
Arab Republic of Egypt	-	-	7	8	11	1	7	-	-	-	-	-
Type:			0	0	0	0	0					
Tunisia	-	-	-	-	-	-	-	-	-	-	-	-
Algeria												
Morocco	1											
Type:	A**											

Notes: A blank indicates no information received. A dash indicates no outbreak. A* = A 22

A** = South-American/European/North-African group of inter-related strains. Types of virus: Asia1 last report from Iraq in July 1975. The World Reference Laboratory carried out typing on samples from the following countries: Iraq (O); Kuwait (A* ASIA I); S. Arabia (O); U.A. Emirates (A*); Algeria (A**); Morocco (A**). Typing was carried out locally in Israel, Iran and Egypt.

(1) No report from Algeria, Lybia and Yemen

TABLE II (a)
 FMD statistics for Europe from 1965* to 1978

Country	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978
Sweden		1												
U.K. incl. Channel Islands	1	34	2 210	187						1				
Denmark	2	39	5	5	8	2								
Netherlands	1 426	2 194	196				21	7		3	2			
Belgium	112	323	22	1	3	2	1			60	21	1		
France	10	59	17	40	35	4	8	2	1	89	2			1
German Fed. Rep.	15 942	4 689	3 350	68	12	8	12	21	7	14	13	5	3	4
Switzerland	671	321		23	1				1					1
Austria	34	22							1 651	7	1			
Italy	5 842	1 554	210	23	132	147	14	9	13	5	31	61	15	39
Malta											24			10
Spain	1 303	29	306	561	522	473	508	361	353	244	90	29	26	
Portugal	770	17	520	923	160	103	1 055							
German Dem. Rep.	80	29	66	3	4	2	3					9	1	1
Poland	39	3	9		6	1	1							
Czechoslovakia	40	4		9	7			11	17		1			
Hungary	53	1	4	60				18						
Romania	4	1		17	6			12	1					
Bulgaria	1	1							3					
Yugoslavia	115	12		76				12	9	4				1
Greece	3	1	80		111	24	18	284	356	13		1	2	
Turkey	3 963	816	2 173	303	1 654	650	359	1 351	1 118	465	351	864	735	830
U.S.S.R.	2 884	3 013	3 323	1 359	473	573	349	569	705	194	120	196	101	30
TOTALS	33 295	13 163	12 491	3 658	3 134	1 989	2 349	2 657	4 235	1 099	656	1 166	883	917

*Totals for the period 1960/1964 were: 22 500 in 1960; 29 229 in 1961; 28 868 in 1962; 21 344 in 1963; 26 781 in 1964

** Approximate figures

WORLD REFERENCE LABORATORY FOR FOOT AND MOUTH DISEASE

TABLE II(b)

CUMULATIVE REPORT FOR 1978

During 1978 307 samples from 29 countries have been examined for type of virus. Virus was demonstrated in 212 of these samples (70%) and the types of virus recovered are tabulated below:-

COUNTRY	No. of samples	O	A	C	SAT1	SAT2	SAT3	Asia 1	No virus recovered
ANGOLA	4								4
BANGLADESH	19	16	1					1	1
BOTSWANA	23				4	10			9
BURMA	13	7	1					3	2
HONG KONG	14	9							5
INDIA	2	1	1						
IRAQ	2		2						
ITALY	3	1	2						
JORDAN	12	6	1						5
LAOS	4	4							
LIBYA	6								6
MALTA	13		13						
MALAYSIA	23	14							9
MOZAMBIQUE	25				8	7			10
NEPAL	1	1							
NIGERIA	13								13
OMAN	12	8							4
PAKISTAN	30	12	10						8
PHILIPPINES	3			1					2
RHODESIA	29				7	15	4		3
SAUDI ARABIA	6	3							3
SOUTH AFRICA	19					16			3
S.W. AFRICA	3					3			
SOMALIA	1		1						
SRI LANKA	4	3		1					
SYRIA	1	1							
TURKEY	9	7	2						
UGANDA	11	3			2				6
VIETNAM	2								2
TOTAL	307	96	34	2	21	51	4	4	95

The positive results were obtained in tests using:-

C.F. tests on original material in 38 cases = 18%
 C.F. tests after passage in tissue culture 174 cases = 82%

Table III Monthly Distribution of FMD outbreaks in 1976-1978

Monthly incidence of FMD outbreaks.

Years	Regions	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1976	Thrace	-	-	-	-	-	-	-	-	-	-	-	-	-
	Anatolia	24	14	21	43	112	233	129	93	65	45	46	39	864
1977	Thrace	-	-	-	1	-	-	1	-	-	2	-	-	4
	Anatolia	60	51	68	72	90	107	63	64	54	41	37	22	729
1978	Thrace	-	5	3	1	5	6	4	4	1	1	-	-	30
	Anatolia	26	27	27	27	59	98	108	123	124	29	40	22	710

THE ANIMAL VIRUS RESEARCH INSTITUTENOTES ON EXAMINATION OF STRAINS FROM YUGOSLAVIA AND MALTA 1978

These strains have been examined in one direction only as homologous sera are not yet available. Information given is the titre of available antisera against the homologous strain and against the Malta and Yugoslav strains, respectively. This enables the calculation of 'r' values. The Agreement between the results in the case of both Yugoslavia and Malta suggests that the two strains are identical or very closely related.

YUGOSLAVIA 15.12.78

<u>SERA</u>	<u>ANTIGEN</u>	<u>SERUM TITRE</u>	<u>'r'</u>
A5 FRANCE 1/68	A5 Fr. YUG. 1/78	113 160	1.4
A10 KEMRON	A10 YUG.1/78	226 113	0.5
A22 IRAQ 24/64	A22 Ir. YUG. 1/78	452 113	0.25
A22 MAHMATLI	A22 MAHM. YUG. 1/78	1808 226	0.125
A24 CRUZEIRO	A24 YUG. 1/78	226 452	2.0
A MOROCCO 5/77	MOROCCO YUG. 1/78	226 57	0.25
LEBANON 1/78	LEBANON YUG. 1/78	640 226	0.35
A PARMA (VACCINE STRAIN)	PARMA YUG. 1/78	226 226	1.0

MALTA 29/11/78

A5 FRANCE 1/68	A5 MALTA 1/78	226 452	2.0 (1.4)
A22 IRAQ 24/64	A22 Ir. 24/64 MALTA 1/78	1280 226	0.18
A22 MAHMATLI	A22 MAHM. MALTA 1/78	1808 160	0.09
A24 CRUZEIRO	A24 CRUZ. MALTA 1/78	320 452	1.41 (2.0)
A MOROCCO 5/77	MOROCCO MALTA 1/78	160 57	0.36
A PARMA (ITALIAN VACCINE STRAIN)	PARMA MALTA 1/78	226 226	1.0

F.A.O. VACCINE VIRUS STOCKS AT 9.1.79

Type	Strain	Passage History	Date of Storage	Amounts Stored	Titre at Storage	Titre at 9.8.76
A ₂₂	USSR 1/66	BTY ₁ , BHK ₈ , S ₁	Feb.'71	25x200 ml. 36x4 ml.	10 ^{7.0} pfu/ml.	10 ^{7.3} pfu/ml.
SAT ₁	Rho 5/55	BTY ₁ , BHK ₅ , S ₁	March'71	32x200 ml. 30x4 ml.	6.8	7.0
SAT ₂	Uganda 6/70A	BTY ₁ , BHK ₁₂ , S ₁	March'71	48x200 ml. 69x4 ml.	6.1	6.2
SAT ₃	Bec 1/65	BHK ₂ , S ₁	Feb'71	34x200 ml. 32x4 ml.	6.8	6.2
Asia ₁	Israel 3/63	BTY ₁ , BHK ₇ , S ₁	March'71	35x200 ml. 33x4 ml.	6.1	6.2
Asia ₁	Iran 1/73	RS ₂ , BHK ₇ , S ₂	Dec.'74	9x700 ml. 17x4 ml.	7.2	6.7

BTY= Bovine Thyroid culture. BHK= Monolayer cell culture.

S = BHK suspension cell culture. RS₂ = IBRS₂ pig kidney cell line.

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

Trust Fund 9042 - Revised Provisional Budget for 1979

<p><u>Source of Fund:</u> Contributions from Member Governments of the Commission.</p> <p><u>Purpose of Fund:</u> To support activities of the Commission whose object is to promote national and international action with respect to control measures against FMD in Europe.</p> <p>Arrears in respect of 1978: \$ 10,140</p> <p>Contributions pledged in respect of 1979: \$ 89,739</p> <p>Less unliquidated obligations \$ 99,879</p> <p>Transfer from Special Account to meet deficit: \$ 3,890</p> <p>\$ 95,989</p> <p>\$ 22,211</p> <p>TOTAL \$118,200</p>	<p><u>Application of Resources in 1979:</u></p> <p>Ch. I Administrative Expenditure under Articles IV and XII.2 of the Constitution</p> <p>P-5 Animal Health Officer x 12 months (Post No. 6162.660)</p> <p>G-6 Admin. Assistant x 12 months (Post No. 6162-546) Temporary Conference Staff</p> <p>Code 9042.00.10 Personal Services \$ 76,500</p> <p>.20 Travel on Official Business/ \$ 9,000</p> <p>.30 Contractual Services \$ 2,000</p> <p>.40 General Operating Expenses \$ 700</p> <p>Sub-total, Chapter I \$ 88,200</p> <p>Ch. II Emergency Expenditure (Special Functions) under Art. V of the Constitution (campaigns) \$ 30,000</p> <p>TOTAL \$118,200</p>
<p>Funds available carried forward from 1978, including interest: \$ 54,085</p> <p>Transfer to General Account to meet deficit: \$ 22,211</p> <p>TOTAL \$ 31,874</p>	<p>SPECIAL ACCOUNT</p> <p>Code 9042.00.20 Travel of Research Group on Official Business \$ 8,500</p> <p>.30 Contractual Services \$ 3,500</p> <p>.80 Fellowships, Grants & Contributions \$ 6,000</p> <p>Reserve: \$ 18,000</p> <p>TOTAL \$ 13,874</p> <p>TOTAL \$ 31,874</p>

1/ Travel of secretariat and Chairman of the Commission