R.J. WOJCIECHOWSKI

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

REPORT OF THE

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

Lisbon, Portugal
20-23 April 1982

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

AGA: EUFMD/X/1982/1

REPORT

of the

Forty-fourth Session of the Executive Committee

of the

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

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INTRODUCTION

The Forty-fourth Session of the Executive Committee of the European Commission for the Control of Foot-and-Mouth Disease was held at the Hotel Lutécia, Lisbon, Portugal, from 20 to 23 April 1982.

Present:

Executive Committee	Dr. H.A. van den Berg, Netherlands	Chairman
	Dr. R. Vollan, Norway	Vice-Chairman
	Dr. R. Rojahn, Federal Republic of Germany	Vice-Chairman
	Dr. F. Walla, Austria	
	Dr. M. Nazlioglu, Turkey	
	Dr. D. Brovas, Greece	
	Dr. N. Tanev Belev, Bulgaria	
	Dr. C.A.M. de Andrade Fontes, Portugal	
	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	
Observers	Dr. F. Manso Rodriguez Asesor Tecnico Subdirección General de Sanidad Animal Madrid, Spain	

Dr. H.A. van den Berg in opening the meeting paid tribute to the hospitality of the Portuguese authorities who had very kindly offered to host the meeting and had provided such excellent conference facilities. He also paid tribute to Portugal's valuable contribution to the work of the Commission over the years and recalled the efficiency and promptness of the veterinary authorities during 1980 when after many years of freedom from FMD, the country underwent a series of outbreaks which caused heavy economic losses.

Before requesting Dr. João Reis Fialho to address the Group, the Chairman reminded the Committee that Dr. Dragonas after many years of valuable membership had retired as had Dr. Ertan and the Committee requested that a note of appreciation of their services to the Commission be recorded in the Report of this Session. He then extended a special welcome to Dr. Manso Rodriguez from Spain who was attending in an observer capacity and to Dr. Y. Ozawa Chief of the Animal Health Service, FAO, Rome.

On behalf of the Minister of Agriculture, Trade and Fisheries, Dr. João Reis Fialho welcomed the participants to Portugal and wished them a successful meeting.

1. Adoption of Agenda

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

1. Adoption of Agenda
2. Foot-and-mouth disease position and related activities of the Secretariat during 1981
   - 2.1 FMD position and prophylaxis in Europe
   - 2.2 Vaccination campaigns in southeastern Europe
   - 2.3 FMD position in other regions of particular interest to Europe
   - 2.4 Swine vesicular disease in Europe
3. Activities of the Research Group and collaborating laboratories
4. Future policy on FMD control in relation to its position in Europe
5. Criteria for determining the level of annual contributions by member countries
6. Accounts and approval of budget
7. Future activities
8. Any other business
9. Adoption of Report

The Chairman then requested the Secretary to introduce the working documents for the Session.

2. Foot-and-mouth disease position and related activities of the Secretariat during 1981

2.1 FMD position and prophylaxis in Europe Table 1 (Appendix 1) of the document prepared by the Secretary on the FMD position and prophylaxis in Europe showed the number of outbreaks and virus types recorded in Europe during 1981. He pointed out that when this document had been prepared the disease situation in Europe was favourable, only sporadic outbreaks having occurred in Italy and in Greece. These had been immediately brought under control through slaughter of all infected animals and ring vaccination. During March/April 1982, however, in certain areas of Europe the situation had deteriorated: 21 outbreaks of FMD had been reported on the island of Funen, Denmark, and 18 in various Districts of the German Democratic Republic. The question of the definition of an outbreak was raised. The Session agreed that an outbreak may be defined as including any number of animals which constitutes an independent livestock unit regardless of the number of animals affected by the disease in that unit.

Dr. Vollan requested that the Commission re-emphasize the importance of an efficient and prompt reporting system which accurately reflects the situation especially in the case of large livestock units (LLU's); a special reporting system may be necessary in the case of the latter. It was agreed that the question of FMD reporting should be referred for consideration to the next General Session of OIE.

Greece Five outbreaks of type O had been reported in Polyanthos in small herds of cattle in the same village. All animals had been destroyed and ring vaccination had been undertaken within a radius of 10 km around the village. The origin of the outbreak was attributed to personal contact but this had not been proved.

Austria The outbreaks which had occurred in March 1981 in pigs and cattle on a farm in Thalheim had been brought under control. Laboratory results at the World Reference Laboratory showed that the type O virus isolated differed from classical European strains of subtype O_1.

Spain From January to October 1981 outbreaks of type C had occurred in six provinces and type A (close to A_5) had been recovered in four outbreaks in the Department of Barcelona. In April 1982 an outbreak was recorded in cattle on the premises of a slaughter house near Bilbao. The observer from Spain informed the Committee that it had not been possible to trade the origin of the affected cattle. The Secretary drew attention to the need for subtyping in order to help countries to take the necessary prophylactic measures. In this respect Dr. van Bekkum emphasized the necessity for clear subtyping results in order to accurately determine the vaccine strain.

Portugal Recrudescence of the disease occurred during the first half of 1981; since then no further outbreaks had been reported. The total cattle population and also a great number of pigs, sheep and goats (see prophylactic scheme) had been vaccinated with AOC trivalent vaccine. In answer to the question raised by the Chairman and Dr. Rojahn, Dr. de Fontes stated that no cost-benefit study had been carried out. As regards ASF no increase in the incidence of the disease had been observed following vaccination against FMD.

France and U.K. The situation has remained unchanged since the report made to the Twenty-fourth Session. Typing at the WRL showed that the O_1 isolates recovered in both countries during the last recorded outbreaks were identical. They were also identical to the O_1 Lausanne virus used in vaccine production.

Denmark After almost 12 years of freedom from FMD, Denmark suffered a series of outbreaks on the island of Funen. The first was diagnosed on 17 March 1982 on a cattle farm located in the southeastern part of the island. The Danish Veterinary Authorities immediately applied very strict sanitary measures. All animals in the affected areas were slaughtered and buried on the spot. Since 17 March a total of 21 outbreaks had been reported in the same infected area of the island of Funen; the last outbreak was reported on 21 April. Total number of animals slaughtered: 1,445 cattle and 2,194 pigs. The whole island of Funen has been isolated. No vaccination has been undertaken.

The Secretary provided a detailed report on the FMD situation in Denmark following his recent visit there.

German Democratic Republic (GDR) The FMD situation in the GDR was examined. 18 outbreaks of FMD type O_1 had been reported in cattle, sheep and pigs since 18 March 1982 in LLU's in the Departments of Rostock and Neubrandenburg. Last outbreak occurred on 11 April 1982.

According to information received from OIE and other sources strict sanitary measures and ring vaccination had been applied. No slaughter had been applied in LLU's. One million cattle had been revaccinated. Virus samples had been sent to Vladimir FMD Laboratory, Moscow, for subtyping. In referring to the situation in Denmark and the German Democratic Republic, the Chairman expressed concern regarding the delays which occur in informing neighbouring countries and OIE as soon as an FMD outbreak is detected.

Prompt diagnosis of the virus type and subtype was considered to be of vital importance for determining the vaccine strain to be used for vaccination. Therefore, samples should be sent to the W.R.L., Pirbright, U.K., for confirmation and further laboratory investigation. The Secretary informed the Session that in the case of the GDR every effort was being made to comply with this. Dr. Vollan pointed out that cooperation in the field of FMD is of the greatest importance to all European countries. He stated that while the Executive Committee was considerably concerned by recent events in Denmark, it was pleased to learn of the control measures enforced by the Danish Authorities and felt confident that the evolution of the epizootic would be observed with great care and that the control measures would be re-evaluated in due course in the light of developments. In referring to the GDR he mentioned the fact that it is not a member of the Commission and information available on control measures applied was limited, it being understood that these were mainly confined to vaccination in and around infected holdings, and the application of strict veterinary police measures.

Dr. Rojahn drew attention to the two different control measures applied against FMD, namely stamping out in northern Europe and vaccination in southern Europe. He referred in particular to the recommendations of the Eighteenth Session of the Commission (1971) in which the need for continuing vaccination was stressed in those countries where this control measure was practised because of the risk of infection associated with such factors as geographical position and the importation of animals from countries where disease still persists and the stamping out policy is not applied. This recommendation was reconfirmed at the Twenty-first Session (1975) and again at the Twenty-fourth Session (1981). He stated that the recent outbreaks in Denmark and GDR reconfirm the recommendations of the Commission i.e. that constant vigilance is necessary against this worldwide very dangerous animal disease.

The Committee expressed full agreement with Drs. Vollan and Rojahn. However, it was considered that while the Commission could not recommend to a member country the policy to be applied for FMD control on its national territory, it should be remembered that Europe is still at risk and vaccination should continue in those countries which still vaccinate. Any change in this policy should be considered in the light of the epizootiological situation in Europe and the particular conditions of each country (whether importing or exporting etc.).

Following review of the information presented by the secretariat, the Executive Committee stated that:

1. FMD, in spite of the definitely improved disease situation in Europe, still continues to be a great danger for cattle, swine, sheep and goats. It can be controlled only by immediate diagnosis followed by suitable sanitary measures against actual cases.

2. If FMD breaks out the neighbouring countries should be informed without delay and each infected country as a member of OIE has a duty to report outbreaks immediately to OIE.

3. The measures employed against FMD in Europe have to be uniform in those areas which have similar structures of animal farms or similar trade regulations especially for importation. This line is followed especially by Denmark with the application of the Scandinavian countries stamping-out policy together with strict sanitary measures to prevent the direct or indirect spread of the disease. Also in the GDR - according to available reports and data - all necessary sanitary measures are applied in order to prevent further spread of FMD in other regions. The Executive Committee is convinced that also in the future the spread of the disease and the danger this represents for other regions or countries will be kept in mind and that the effectiveness of the measures taken against FMD will be constantly and carefully re-examined.

4. The different prophylactic measures of groups of countries should be uniformly applied in the future. In particular risks due to the geographic situation of individual countries or groups of countries or to different import policies should not be neglected. Groups of countries which have so far vaccinated against FMD, such as the Netherlands, Luxembourg, Belgium, Federal Republic of Germany, France, Switzerland and Italy should continue to do so in order to prevent the virus from gaining a foothold because of different levels of immunity in the animal population.

5. Cooperation and exchange of information between all European countries as well as with the International Organizations should be intensified. This applies to epizootiological as well as to scientific and administrative aspects.

The Executive Committee expressed the hope that the reporting system with as detailed information as possible on the control measures in force both in the member countries and in countries not yet members of the Commission can be strengthened in the light of recent experience.

In concluding its review of the general FMD prophylaxis in Europe the Committee expressed its concern in regard to the situation created in Europe where the level of vaccination coverage against FMD is steadily decreasing especially in importing countries and in those countries which because of their geographical position remain particularly vulnerable to introduction of the disease (Appendix I).

2.2 Vaccination campaigns in southeastern Europe The Committee was informed that for the maintenance of the buffer zone in Thrace in 1981, 1,350,000 doses of bivalent vaccine ($A_{22}/0$) had been furnished to the countries concerned (Greece, Bulgaria and Turkey) at a cost of US$ 635,000. Based on the recommendations of the Twenty-fourth Session of the Commission held in Rome in 1981, the Director-General of FAO launched a further appeal early in 1982 to the EEC and non-EEC countries for financial assistance to continue the campaigns in southeastern Europe through 1983 and 1984.

The secretariat provided a full statement of income and expenditure of funds allocated for the campaigns in southeastern Europe since 1978. (See Appendix 2)

Turkey Dr. Nazlioglu provided information on the FMD position in Turkey during 1981. He stated that while in the area of Thrace the disease situation continued to improve and no further outbreaks had occurred since 1979, in Anatolia FMD continues to be present with 838 outbreaks recorded in 1981. Type O and A_{22} were diagnosed at the Ankara FMD Institute. Vaccine production at the SAP Institute in Ankara continues and the water problem has been definitely solved. In 1981, 7 200 000 doses of monovalent vaccine had been produced and used for the maintenance of the buffer zone and the vaccination programme in Anatolia. The total number of animals vaccinated during 1981 in the Thrace buffer zone in Anatolia amounted to 5 565 840 cattle and sheep.

Dr. Nazlioglu expressed his Government's appreciation to FAO and to the European Commission for their continuing assistance.

Infrastructure of FMD vaccine production in southeastern Europe The Secretary informed the Committee of the latest developments in the establishment of the industrial scale FMD vaccine laboratories in Turkey and Bulgaria.

Turkey Dr. Nazlioglu stated that the construction of the new building for industrial-scale vaccine production continued with funds allocated by the Turkish Government (60 million T.L. for 1982) and it was expected that it would be completed this year. Therefore, it was essential that the financial assistance requested from EEC for the equipment be provided as soon as possible. The Turkish Government is prepared to cooperate with a qualified European FMD Institute in order to speed up the completion of the new FMD Institute and official steps are being taken in this respect.

Bulgaria Dr. Belev informed the Committee on the development of the new FMD large-scale vaccine production unit at Sliven set up under the aegis of the FAO/UNDP project. The installation of the security system is under way at a cost of US$ 400 000 and it is expected that the laboratory will become operational by the end of 1983. Dr. Belev expressed his thanks to FAO for the assistance provided and to the Secretary of the Commission who acts as technical adviser to the project.

Greece Dr. Brovas stated that the vaccination in Greece was that applied in the Evros buffer zone and vaccine production at the FMD Institute in Athens was limited to the maintenance of a stock for emergencies. Only conventional type OAC FMD virus is used for vaccine production in Greece. Vaccination in the buffer zone is carried out with type A22/0 supplied through FAO.

2.3 FMD situation in other regions of particular interest to Europe The Secretary drew the attention of the Committee to the FMD situation in the Near East and the danger which this area represents for Europe because of the heavy traffic which exists between Europe and the Near and Middle East. The Committee's attention was further drawn to the fact that indiscriminate importation into the Region had resulted in a pattern of virus types in the area similar to those of the neighbouring regions, WRL Information Note No.32 - Appendix 4. This epidemiological situation which constitutes a permanent risk for Europe due to the heavy traffic between Europe and the Near and Middle East countries calls for constant vigilance and an efficient control system at the check points along frontier areas and at ports into Europe.

Dr. Ozawa informed the Committee that a seminar on FMD control programmes in the Near East region would be held in Ankara, Turkey, from 17 to 20 October 1982. The Secretary expressed the opinion that the Commission should be represented at this seminar since it would be a good opportunity to meet delegates from the Near East and to exchange views on the FMD control programmes in the region.

The disease position in other areas of interest to Europe was reviewed and the Secretary informed the Committee on the new FMD vaccine production Institute in Botswana which has a

production capacity of twenty million doses of vaccine. He informed the delegates that FAO is organizing a training course in FMD diagnosis and control for participants from Southern African countries. The course will be held at the FMD Institute in Gaborone from 18 to 27 October 1982.

The FMD situation in South America was reviewed and the progress made in FMD control in other areas of interest for Europe was discussed.

Dr. van Bekkum provided information concerning his mission to Argentina as FAO consultant for the National Programme for the control and eradication of FMD (PLACEFA). The Committee requested the Secretary to collect more accurate information on the FMD situation in the Near and Middle East, Africa, and other areas of interest to the Commission. The Committee again stressed its interest in maintaining close relations with the Pan-American FMD Center.

2.4 Swine vesicular disease in Europe The Secretary provided information on the SVD position in Europe. A number of outbreaks of the disease had occurred in the U.K. and Italy and one in the Federal Republic of Germany.

The Committee agreed that the present policy regarding SVD control in Europe remained valid.

3. Activities of the Research Group and Collaborating Laboratories

Dr. van Bekkum introduced the document on the "Activities of the Research Group and Collaborating Laboratories".

The Group held its annual Session from 29 September to 1 October 1981 at the Federal Research Institute for Animal Virus Disease at Tübingen, Federal Republic of Germany. The Session was attended by members of the Group, as well as by Dr. Sütmoller, Pan-American Foot-and-Mouth Disease Center, Rio de Janeiro, Dr. Kihm, Basel, and scientific workers from IFFA, Mérieux, France, and Wellcome, U.K.

The main points discussed were:-

1) Further information on preparation and shelf-life of concentrated FMD vaccines. Progress had been made but more data were needed as it seemed that purified virus antigens prepared with some strains might be less stable than others, once incorporated into vaccines.

2) Procedures for elution and testing of innocuity of vaccines. The Group had concluded that supplementation of the innocuity test in cattle with a test in cell culture, using a large quantity of eluted and concentrated antigen should be recommended. The procedure for antigen elution, as specified in the European Pharmacopeia Monograph on FMD vaccines had been found not to be effective with all vaccines. The presence of saponin was reported to inhibit elution of some virus strains.

3) The Collaborative Laboratory Study is being continued. Further standardization of procedures for the measurement of 146S virus particles is the purpose of Phase VI of the study.

4) With regard to matters referred to the Research Group by the Executive Committee of the Commission, the Group expressed the following opinions:-

(a) The stock of BHK cell adapted seed viruses of exotic FMD types held by the AVRI should be continuously checked for their appropriateness for emergency use in Europe.

(b) The Group considers that vaccine safety is primarily the responsibility of vaccine producers and national control authorities. It feels that it would be inappropriate for the European Commission to make specific recommendations regarding the formulation of vaccines.

(c) With regard to the standards for the potency of FMD vaccines, the Group expressed the opinion that vaccines should contain at least 7 PD_{50} as an observed value.

(d) Regarding the movement of animals and animal products from areas where vaccination with inactivated vaccines against exotic FMD viruses had been practised but no disease was present, the Group expressed the opinion that restrictions on movement should be maintained for a period of two months from the date of vaccination.

5) The Group discussed the desirability of recommending a change from A_5 to extra-European strains of type A virus for vaccine production. It was reported that the epidemiological situation in South America was more complicated than had previously been thought. The Group therefore was not able to recommend any current field strain for incorporation in European vaccines. Laboratories in Europe should, however, equip themselves in reference sera against extra-European viruses in order to be able to identify new isolates without delay. Samples from outbreaks with unusual characteristics should be submitted to the World Reference Laboratory for FMD without delay.

6) The Group expressed the opinion that national authorities should take steps to ensure that materials leaving FMD laboratories for genetic engineering studies carried out elsewhere have been properly tested for the absence of infectivity. Legislation covering the importation of FMDV derived materials used in recombinant DNA work should be developed. The Group recognised that important results had been obtained in recombinant DNA work with FMD virus, especially in determining the nature of the virus genome.

Much work will, however, be required before the possible value of the polypeptides obtained by genetic engineering for the purposes of vaccination can be established.

Dr. van Bekkum expressed words of appreciation to Dr. Rojahn and to the Government of the Federal Republic of Germany for the arrangements made for and hospitality offered at the last Session of the Research Group, held in Tübingen in September/October 1981.

The next meeting of the Research Group has been planned in September 1982 and the Animal Virus Research Institute, Pirbright, has accepted to host it.

A provisional Agenda was presented.

4. Future policy on FMD control in relation to its position in Europe

The Chairman requested the Secretary to introduce the working document on future policy regarding FMD control in Europe.

The Secretary in underlining the main points of this document stated that in spite of the efforts made and the remarkable progress achieved in FMD control in Europe, risk of introducing exotic and non-exotic virus types still persists.

Some countries are relaxing vigilance while the whole of the European continent remains vulnerable to invasion by FMD. Bearing this in mind the following lines of activity should be given high priority in the future policy of the Commission:

i) the control of residual FMD in Europe
ii) the protection of southeastern Europe
iii) vigilance over importation of livestock and meat products, and
iv) collaboration with International Organizations, OIE, EEC, etc.

The Committee approved the proposal for future policy as outlined by the Secretary. As regards technical assistance, the Committee agreed that the Commission should continue as in the past to provide such assistance through its Secretary, whenever requested through FAO, provided there were no financial implications for the Commission.

Since there was some divergence of opinion regarding the possibility of organizing FMD training courses in Europe, the Chairman suggested that further discussion of this subject be deferred to the next Session of the Committee by which time the Research Group would have had the opportunity to examine it and make some proposals in this respect.

Dr. Ozawa pointed out that as regards the Near East, a region of special interest for the Commission, any assistance given would not imply financial implications insofar as MINEADEP (an FAO regional project) is in a position to finance any such assistance.

As regards the setting up of an international FMD vaccine bank, the Committee reconfirmed its position as stated at its Forty-third Session. Dr. Rojahn recommended that the Secretary continue to collect information in this respect and keep the Committee informed on developments. As regards collaboration with International Organizations and in particular with the FMD Commission of OIE, it was strongly recommended that duplication of activities be avoided.

5. Criteria for determining the level of annual contributions by member countries

It was recommended that the secretariat send this document to all member countries in time for consideration at the Twenty-fifth Session to be held in Rome in April 1983.

6. Accounts and approval of budget

The financial report was introduced by the Administrative Assistant to the Commission. Dr. Nazlioglu pointed out that his Government had already paid contributions due for 1981 and 1982 whereas the document showing the pledge situation (provisional) as of 31.12.81 showed that the Turkish contribution was still outstanding. The secretariat indicated that this matter would be brought to the attention of the office concerned at FAO Headquarters.

The Administrative Assistant explained to the Committee that the amount earmarked for temporary assistance and overtime was intended for secretarial assistance from time to time since it was not always possible to obtain such assistance within the framework of the present staffing system.

The accounts for 1981 and the administrative budget for 1982 were approved by the Executive Committee without change.

7. Future activities

The Secretary will continue activities within the European continent along the lines of the Functions specified under Article IV and V of the Commission's Constitution and the programme of work approved by the Executive Committee and the Commission; in particular:

a) Maintenance of the buffer zone in Thrace. Coordination of efforts made by all interested countries in assuring disease surveillance in Thrace. Vaccine will be procured with the funds especially allocated for this purpose.

b) Maintaining close contacts with government authorities, OIE, EEC and other specialized agencies and institutes involved in the control of FMD in Europe.

c) Visiting countries involved with FMD outbreaks in Europe or in other regions of special interest to Europe and keeping all Commission members regularly informed on the disease position.

d) Collecting accurate and reliable information on the measures adopted to prevent the escape of virus from FMD vaccine production laboratories located in Europe.

e) Organizing Sessions of the Research Group in 1982 and of the Executive Committee and the Commission in 1983.

f) Providing technical support to the FAO/UNDP projects for FMD in Bulgaria and Turkey.

g) The Commission through its Secretary will participate in activities carried out by FAO in the field of FMD throughout the world. However, priority will be given to Europe and regions of interest to Europe.

h) Attendance at OIE General Sessions, Regional Sessions and Sessions of the OIE FMD Commission and at any other international meetings where FMD policy and control are discussed.

8. Any other business

Membership The Committee expressed the wish that those countries in Europe which have not yet become members will soon join as full members. The Secretary stressed the need for the Commission to find ways to overcome the obstacles which at present impede certain countries from becoming members.

The Committee requested the secretariat to look into the possibility of providing associate membership in the case of those countries which are unable to enjoy full membership.

Forty-fifth Session On behalf of the Government of the People's Republic of Bulgaria, Dr. Belev invited the Committee to hold its Forty-fifth Session in Sofia from 8 to 11 February 1983.

Before closing the meeting the Chairman expressed his appreciation to the Portuguese authorities for the excellent arrangements made for this Session of the Executive Committee and for the warm hospitality extended to all the participants. He also expressed his appreciation to the secretariat for the preparation of the working documents for and organization of the meeting.

Appendix 1

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

Approved budget/actual expenditure 1981 (Provisional)

		1981 Budget	1981 Actual Expenditure	1982 Prov. budget
GENERAL ACCOUNT				
Application of resources		US$	US$	US$
.10	Personal services			
	1 P5 Animal Health Officer 1 G6 Administrative Assistant	97,700	90,189	93,000
	(Temp. assistance and interpreters for meetings)		(4,654.31) (for meetings)	
.20	Travel - Secretariat and Chairman	7,000	3,663	10,000
.30	Contractual services - World Reference Lab.	2,000	2,119	2,000
.40	General Operating Expenses	500	509	700
.50	Emergency Exp. (Special Functions, Art. V of the Constitution)	10,000	-	10,000
		117,200	96,480	115,700
SPECIAL ACCOUNT				
.20	Travel of Research Group	6,000	3,984	7,000
.30	Contractual Services for WRL in relation to Laboratory Study	2,865	(No charge in 1981 due to late arrival of invoice)	5,000
.80	Fellowships	2,000	-	-
		10,865	3,984	12,000

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

Provisional Administrative Budget for 1982 - TF 9042

		US$	US$
.10	Personal Services		
	01. P5 Animal Health Officer x 12 months	61,000	
	G6 Admin. Asst. x 12 months	26,000	
	03. Temporary assistance	5,000	
	05. Overtime	1,000	93,000
.20	Travel		
	Secretariat and Chairman		10,000
.30	Contractual services		
	.39 Services to be rendered by WRL in 1982		2,000
.40	Gen. Operating Expenses		
	.45 Hospitality	500	
	.49 Miscellaneous	200	700
.50	Supplies and Materials (Special Functions/Art. V of Constitution)		10,000
	Annual income from pledges US$ 116,660.70 1/		115,700

SPECIAL ACCOUNT

.20	Research Group Travel		7,000
.30	Contractual Services (WRL in connection with Laboratory Study)		5,000
		Uncommitted balance	4,087
	Balance as of 31 December 1981 US$ 16,087		16,087

1/ France to pay from date of entry;
i.e. if membership formalized by June 1982 contribution for this year would increase income by US$ 9,227,40.

Trust Fund No. 9040.00 - Internation European Commission for the Control of Foot-and-Mouth Disease

Pledge Position as at 31 December 1981 (Provisional)
(expressed in US dollar equivalents)

	Contributions outstanding at 31 Dec.1980	Contributions due in 1981	Received at 31 Dec. 1981	Advance on 1982 Contributions	Total outstanding 31.12.81
Government of Austria	-	3,042.00	3,042.00	-	-
" " Belgium	-	5,070.00	5,070.00	-	-
" " Bulgaria	-	1,521.00	1,521.00	-	-
" " Cyrpus	-	507.00	507.00	-	-
" " Denmark	-	5,070.00	5,070.00	-	-
" " Finland	-	3,042.00	3,042.00	-	-
" " Germany, Fed. Rep. of	-	10,140.00	10,140.00	-	-
" " Greece	-	1,521.00	1,521.00	-	-
" " Hungary	-	3,042.00	-	-	3,042.00
" " Iceland	-	507.00	1,166.00	659.00	-
" " Ireland	-	1,521.00	1,521.00	-	-
" " Italy	-	10,140.00	9,287.00	-	853.00
" " Luxembourg	-	507.00	507.00	-	-
" " Malta	-	507.00	507.00	-	-
" " Netherlands	-	5,070.00	5,070.00	-	-
" " Norway	-	1,521.00	1,521.00	-	-
" " Portugal	1,521.00	1,521.00	3,042.00	-	-
" " Spain	-	5,070.00	-	-	5,070.00
" " Sweden	-	5,070.00	11,661.00	6,591.00	-
" " Switzerland	-	5,070.00	5,070.00	-	-
" " Turkey	3,582.00	3,042.00	3,012.00	-	3,612.00
" " United Kingdom	-	14,196.00	14,196.00	-	-
" " Yugoslavia	-	3,042.00	-	-	3,042.00
	5,103.00	89,739.00	86,473.00	7,250.00	15,619.00

France not yet member - contribution for 1982 set at USE 18,454.80

Appendix 2

FMD situation and prophylaxis in Europe

The disease situation in Europe continues to improve. The type of epizootics that in the past devastated the livestock industry no longer occurs. The sporadic cases reported in 1981 (Table 1) were mainly in connection with the uncontrolled movement of animals and animal products or with post-vaccination accidents. This improvement in the situation of the disease is undoubtedly the most tangible result of the concerted efforts made in Europe to prevent FMD. However, while the disease continues to be present in other continents, Europe remains at risk and for the foreseeable future must maintain a high level of protection through vaccination programmes and constant vigilance in order to avoid the introduction of the disease into the European continent where in many countries the vaccination policy has been discontinued and in consequence the protection level decreased.

In 1981 the situation regarding foot-and-mouth disease in Europe remained generally favourable. The disease, except in the case of Portugal, Spain and France, where serious outbreaks occurred, during the first six months of 1981 was confined to isolated foci in the rest of Europe these, however, immediately being brought under control. The number of outbreaks of FMD and their virus type recorded in Europe, the Near East, and northern Africa during 1981, is shown in Table 1 and Table 1a.

Italy Three outbreaks of FMD were recorded during 1981 and were brought under control without further spread of the disease. These were:-

(i) 31 March one outbreak Type C_1 in non-vaccinated young cattle imported from France. The outbreak occurred in Assisi, Province of Perugia, after a stopover for 15 days at Cuneo. Origin of the disease unknown.

(ii) 15 April one outbreak Type C_1 in non-vaccinated swine, Province of L'Aquila - all affected animals were destroyed.

(iii) 1 June one outbreak in cattle, Province of Modena; the four animals affected were destroyed. The virus was type A (close to A_5).

Greece After almost three years of freedom from FMD, an outbreak of FMD Type O was reported on 21 August 1981 in Polyanthos, Department of Rododi on a farm in 14 head of cattle out of which six were affected. All animals in the herd were slaughtered and disposed of immediately. Sanitary and veterinary police measures, including ring vaccination, were applied. Four secondary outbreaks were reported ten days after the occurrence of the first on four small farms situated in the same commune of Polyanthos in 18 cattle. All animals were slaughtered and disposed of. Initial infection was probably due to mechanical transmission of the virus by the owner of the farm on which the first outbreaks occurred. The disease appeared ten days after the return of the owner from a country in which outbreaks of FMD of the same type were occurring at that time. The virus concerned was identified by the FMD Institute in Athens and confirmed by the WRL, Pirbright, U.K. These preliminary results indicate (a) a similarity between GRE 1/73 and GRE 1/81; (b) both show a similar relationship with O/Austria 1/81 and O_1OBFS 1860 although recent work at the WRL has demonstrated Austria 1/81 to be different from the O_1 sub-group. Investigations are continuing (WRL Inf.Sheet No.31,Appendix 3). In Greece routine vaccination is applied only in the buffer zone in Evros/Thrace with vaccine provided through FAO for the maintenance of vaccination campaigns in Thrace (southeastern Europe).

Austria The outbreaks of FMD Type O which occurred in pigs and cattle in March 1981 on a farm in Thalheim, Lower Austria, were immediately brought under control by the slaughter of all affected and suspected animals on the farm. In addition, ring vaccination of all susceptible animals was carried out within a radius of 30 km from the outbreaks involving about 310,000 pigs and 90,000 cattle. There were two possible causes of the outbreak: foreign labourers on their way back to Austria carrying animal products contaminated with FMD virus and illegal importation of frozen meat. This was confirmed when the laboratory results at the WRL, Pirbright, showed that the Type O virus isolated differed from the O_1 European strain.

Spain From April 1980 no outbreaks occurred until January 1981 when new foci of Type C appeared in pig herds in three Provinces: Barcelona, Lerida and Huesca. These outbreaks were probably responsible for outbreaks during the same period in a neighbouring Departement of France.

New outbreaks of Type C reappeared in pigs in Murcia-Navarra in April 1981 while in October of the same year three outbreaks of Type C occurred in pigs in Barcelona. All the outbreaks of Type C which occurred were confined to pigs with no spread to cattle. In March 1981 two outbreaks of Type A (close to A5) appeared in cattle in the Department of Barcelona.

Routine vaccination of cattle was carried out annually using trivalent OAC aluminium hydroxide vaccine while oil-based vaccine was used for pigs with satisfactory results in the case of ring vaccination in affected areas.

Portugal The disease situation deteriorated during the first six months of the year with 303 outbreaks of Type C_1 recorded in cattle, pigs, sheep and goats in different premises from January to July 1981.

The total number of outbreaks and animals slaughtered is given hereunder:

Month	Outbreaks	Cattle	Sheep	Goats	Pigs
January	160	849	805	14	16,997
February	84	380	280	-	3,784
March	27	130	42	3	3,934
April	29	236	130	-	7,859
May	2	20	-	-	150
June	. . . . . no outbreaks				
July	1	11	-	-	-

No further outbreaks were recorded after July until the end of 1981.

The disease control policy applied consisted of strict sanitary measures and the vaccination of all animals with OAC trivalent vaccine. A stamping out policy was not applied. The number of animals vaccinated in 1981 was: cattle 1,000,563 (corresponding to the total cattle population in the country), sheep 40,370, pigs 251,787 and goats 16,081. Vaccination in Portugal is compulsory only for cattle and large pig herds and for this reason practically all small ruminants not covered by vaccination constituted a permanent source of infection in the country. The Commission has followed closely events in Portugal since the beginning of the disease and, following the visit to Portugal of the Secretary, a Tripartite Meeting of FAO/OIE/EEC was held in Paris in December 1980 to discuss the problems current in the country and at which it was proposed that Portugal should receive substantial aid from EEC or other international Organizations in implementing disease control and eradication measures in combating the emergency situation. At the Twenty-fourth Session of the Commission in Rome in April 1981, the Chairman again stressed the gravity of the situation in Portugal especially in view of the concurrent presence of African Swine Fever in the country (see Report of the Twenty-fourth Session, April 1981).

France After almost two years of freedom from FMD the country suffered two serious waves of the disease at the beginning of 1981, the first in the Departement des Pyrénées Atlantiques in January and February, and the second in the Departements Côtes du Nord and La Manche in March. The first outbreak, Type C, originated in pigs kept on a farm in the commune of Espelette close to the Spanish border. The second outbreaks were reported in pigs in an area close to the first outbreak. The virus was Type C. In both cases a stamping out policy was applied involving a total of 567 pigs, 80 cattle, 281 sheep and 22 goats. Ring vaccination of pigs was undertaken with oil monovalent Type C vaccine.

The second wave of FMD occurred in March, first in the Departement Côtes du Nord with 13 outbreaks of Type O_1 reported. Cattle, pigs and sheep were affected. Origin of the virus was unknown. Sanitary measures and a stamping out policy were applied involving 8,687 pigs, 625 cattle and 105 sheep and goats. Ring vaccination covering 700,000 animals was undertaken. The second outbreak, Type O, was reported in the Departement of La Manche on 21 March 1981 in young unvaccinated cattle. The virus was the same as that present in the Departement Côtes du Nord; seventy (70) cattle were slaughtered and strict sanitary measures were applied.

United Kingdom Jersey and the Isle of Wight At the Twenty-fourth Session of the Commission in April 1981 the presence of FMD in both islands was widely discussed details being contained in the Commission's report. Strict sanitary measures and stamping out policy were applied to all susceptible animals on the premises where outbreaks had occurred. A total of 254 cattle and 364 pigs were destroyed at a total cost of £178,174 in respect of indemnities and other costs. A comprehensive investigation into the origin of the outbreaks was carried out and subtyping of the virus at the AVRI showed it to be identical to virus causing outbreaks in Côtes du Nord, Jersey and La Manche. Known information concerning the beginning of the outbreaks in Jersey and La Manche indicates that herds there were infected by the same route and at the same time as in the Isle of Wight. The Isle of Wight is about 160 miles from the outbreaks in Britanny and this represents the furthest known carriage of virus by airborne means.

USSR From information received through official sources (OIE and two epizootiological bulletins from USSR Veterinary Services) 10 outbreaks of FMD were recorded in Ukraine, Armenia (type O_1) and RSFSR Provinces (type A_{22}) in 1981. The disease position in USSR is of great importance for Europe and the Secretary will try to obtain more accurate information on the FMD situation especially in those areas of the USSR which are close to Europe.

General prophylaxis in Europe

The Table on FMD prophylaxis in Europe during 1981 (page 18 of this Report) shows the extent of the vaccination coverage and the types of vaccines used in Europe. The number of countries where the entire cattle population is covered by vaccination every year is slowly but steadily decreasing so that large territories remain unprotected in Europe. Wide gaps exist in the prophylactic system of southeastern Europe.

In addition to the vaccination schemes, the application of the stamping out policy combined with ring or area vaccination has rapidly brought the disease under control in countries where sporadic cases occurred in 1981. Although this shows promptness of action in disease control in Europe, the various prophylactic measures which are now being applied, including vaccination, should be intensified especially in those countries where risks of infection still persist (importation of animals, geographical position etc). The Commission at its Twenty-fourth Session held in Rome in 1981 recommended that national vaccination programmes should continue over the next five years. This recommendation should be given serious consideration especially in those countries where indigenous sources of infection or trade with infected areas constitute a continuous threat of disease invasion.

Travel and special activities of the Secretariat

The activities of the Secretary during 1981 have been along the lines specified under Articles IV and V of the Commission's Constitution and the recommendations of the Forty-third Session of the Executive Committee held in Crete, 27-30 January 1981, the Twenty-fourth Session of the Commission held in Rome, 7-10 April 1981, and the Session of the Research Group of the Commission held in Tübingen, Federal Republic of Germany, 29 September to 1 October 1981.

In addition to the Commission's activities, the Secretary has provided technical assistance to FMD projects, for which FAO is the executing agency, in the following countries:- Argentina, Bulgaria, Burma, Colombia, Greece, Kampuchea, Lao, Peru, Sri Lanka, Turkey, Uruguay and Zambia. He also participated in all FAO activities in the field of FMD in various parts of the world.

The Secretary attended the Forty-ninth General Session of OIE held in Paris in May 1981, and the Fifth International Congress of Virology held in Strasbourg, 2-7 August 1981. A number of visits have been paid to Turkey and Bulgaria for project matters for which the Secretary acts as Chief Technical Adviser. Together with Dr. van den Berg, Chairman of the Commission, the Secretary visited Turkey, Bulgaria and Romania for the purpose of reviewing progress in the development of the new FMD Institute for large-scale vaccine production at Ankara and to discuss FMD control programmes in southeastern Europe and the buffer zone in Thrace. Members of the Executive Committee have been kept informed of the activities of the Secretary through copies of his back-to-office reports.

Membership of the Commission

Since its establishment, the European Commission for the Control of Foot-and-Mouth Disease has been striving to achieve a membership in which all European countries would be represented. Membership increased gradually over the years from six in 1953 to 23 in 1981. Parliamentary ratification of France's application for membership is still awaited; when formalized membership will reach 24 countries. A certain number of eastern European countries have not yet decided to adhere formally to the European Commission although they participate indirectly in the Commission's work. These are: Albania, Czechoslovakia, German Democratic Republic, Poland, Romania and the U.S.S.R. It is hoped that the difficulties which have so far prevented these countries from becoming members will soon be overcome. The Secretary will make every effort to speed up this development.

TABLE I

Outbreaks of foot-and-mouth disease and virus types recorded in Europe, the Near East and Northern Africa during 1981
(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)			1-0 1-0									
Belgium (1976)												
Netherlands (Jan. 1977)												
Luxembourg (1963)												
France (April 1979)	2-C	1-C	14 -0									
Fed. Republic of Germany (1980)												
Italy			1-C	1-C		1-A						
Switzerland (1980)												
Austria (March 1975)			2-0									
Spain		11-C	$4\text{-}C_{A_5}$							3-C		
Portugal	160-C	84-C	27-C	29-C	2-C		1-C					

See notes overleaf

TABLE I (contd.)

EUROPE (contd.)	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Czechoslovakia (May 1975)												
German Democratic Republic (1980)												
Poland (1971)												
Yugoslavia (1978)												
Hungary (November 1972)												
Romania (January 1973)												
Bulgaria (February 1973)												
Albania (1959)												
Malta (1978)												
Cyprus (1964)												
Greece (Sept. 1977)								5 -0				
Turkey	52 0A*	56 0A*	78 0A*	78 0A*	114 0A*	136 0A	82 0A*	61 0A*	74 0A*	56 0A*	33 0A*	15 0A*
U.S.S.R.	2-0	1-0	1-0				1-0 1 Arm.			1-0	1-0 Ukr.	3 -0A*
NEAR EAST												
Jordan (1980)		1-0	2-0	4-0	5-0							
Lebanon	...	...	...	2-0	...	...	2-0	...	...	...	...	...
Syria		...	...	1-0	...	...	...	...	...	...	...	...
Iraq*						240-0	1271	257	...	606	...	780
Iran	9-0	8-0	7-0	...	6-0	12-0	...	...	...	...	...	...
Israel	1-0	3-0	5-0	30-0	23-0	8-0	1-0 1-A*	1-A*				

See notes overleaf

TABLE I (contd.)

NORTHERN AFRICA	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Arab Republic of Egypt		2-0	1-0							2-0		
Tunisia			3-0									
Algeria												
Morocco												
Libya										2-0		

Notes: A blank indicates no outbreak; ... = no information received

A* = A_{22}; A** = South American/European/North African group of inter-related strains (WRL Dec.1977); A=$A_5(A_7)$; O=O_1

Types of virus: The WRL carried out typing on samples from 29 countries and the types of virus received are tabulated in the attached Cumulative Report for 1981.

FMD OUTBREAKS RECORDED IN EUROPE FROM 1971 TO 1981 Table 1a

Country	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Sweden											
U.K. (incl. Channel Islands)				1							2
Denmark											
Netherlands	21	7		3	2						
Belgium	1			60	21	1					
France	8	2	1	89	2			1	25		17
Germany Fed. Rep. of	12	21	7	14	13	5	3	4		2	
Switzerland			1					1		1	
Austria			1,651	7	1						2
Italy	14	9	13	5	31	61	18	43	4	1	3
Malta					24			10			
Spain	508	361	353	244	90	29	26		7	4	18
Portugal	1,055									576	303
German Dem. Rep.	3					9	1	1		1	
Poland	1										
Czechoslovakia		11	17		1						
Hungary		18									
Romania		12	1								
Bulgaria			3								
Yugoslavia		12	9	4				1			
Greece	18	284	356	13		1	2				5
Turkey	359	1,351	1,118	465	351	864	735	830	751	856	835
U.S.S.R.	349	569	705	194	120	196	101	30	9	18	10
TOTAL	2,349	2,657	4,235	1,099	656	1,166	886	923	796	1,459	I 195

FMD PROPHYLAXIS IN EUROPE DURING 1981

Country	VACCINATION PROGRAMMES			VACCINES	
	Species vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle dose Cost	Potency required and results
Netherlands	All cattle above four months OAC vaccines 1981 C: 4,218,000	From 1st Dec. to 1st March	the entire country since 1953	Triv. $O_1/A_{10}/C$ (Frenkel) Vaccine plus injection: D. Fl. 4.15 (1)	At least 5 cattle PD_{50}. Resistance to generalization after intradermolingual challenge with 10,000 cattle PD_{50}. PD_{50} are calculated from three groups of 5 cattle. Results of potency testing: about 10 cattle PD_{50} per valency.
Belgium	All cattle above three months of age. The maximal interval between 2 consecutive vaccinations is 13 months. 1981 C: 2,300,000	From 1 Dec. to 31 March	the entire country since 1962	Trivalent OAC (O_1 A_5 C_2) cattle: 10 cc sheep: 5 cc 25 B. Fr. (1)	More than 5 cattle PD50 the challenge being 10,000 ID50 intradermolingually.

Note: (1) vaccine and vaccination costs borne by owner.

Country	VACCINATION PROGRAMMES			VACCINES	
	Species vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle dose Cost	Potency required and results
Luxembourg	All cattle above two months of age 1981 Bov. 195,000	From 1 Dec to 31 Jan	the entire country since 1966	Trivalent OAC (O_1 A_5 C_2) Cattle 5 cc Price 14.61 B. Fr. (1)	More than 5 cattle PD50 the challenge being 10,000 ID_{50} intradermolingually.
France	A. All cattle above 6 months B. All sheep & goats above 3 months. 1980 C: 19,210,000 Sh & G: 586,000 P: 23,500	All year round but mainly from Nov. to May Before transhumance	A. The entire country since 1962 B. The frontier departments of the Pyrennees	Trivalent OAC (A Allier 1960 O Lausanne 1965 C Vosges 1960) cattle: 5 cc sheep: 1.7 cc Price: 2.18 F. Fr. (triv. dose) (2)	Principle: 85% protection rate in cattle against generalization by intradermolingual challenge. Methods and minimus: Index K (Lucam) = 1.2 Index C = 10^2 Index S = 10^1 Vaccine produced in France controlled by the L.N.P.
	1981 vaccination programme same as previous year. Additional ring vaccination in outbreak areas i.e. Pyrénées Atlantiques (type C) and Côtes du Nord, Manche (type O_1).				

Note: (1) vaccine free of charge; vaccination cost 97.8 Fr. shared by the state (7 B. Fr.) and the owner (10 B. Fr.)
(2) vaccination of cattle: all expenditure borne by the owner

Country	VACCINATION PROGRAMMES			VACCINES	
	Species vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle dose Cost	Potency required and results
Switzerland	All cattle born before 1 Jan. 1981 C: 1,640,395	From 15 Feb. to 15 May	The entire country since 1966	Trivalent OAC cost of vaccine SF. 1.6 (1) cost of injection: SF. 1.7	Vaccines almost entirely imported from France
Federal Republic of Germany	All cattle above five months	Late in winter before admission to pasture	The entire country since 1965	Trivalent OAC (O_1 A_5 C) Dose: 5 cc. Cost: DM 3.- (2)	Three cattle per type are challenged by rubbing a virus suspension on the tongue. No generalization admitted.

Note: (1) vaccine and injection (total cost: S.Fr. 3.30) free of charge to owner
(2) in some "Länder" vaccination is free of charge, in others the owner is charged 50% of cost.

Country	VACCINATION PROGRAMMES			VACCINES	
	Speices vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle Dose Cost	Potency required and results
Democratic Republic of Germany	All cattle above 5 months: March 1980 C: 300,000 vaccine type O (2) 1981 C:	From 1 Oct. to 31 Dec.	The entire country since 1950	Trivalent OAC Dose: 5 ml (1)	
Portugal	Cattle and sheep above 3 months. Goats above 2 months, pigs above 2 months. 1981 C: 1,005,563 P: 251,787 Sh: 40,370 G. 16,081	A. Spring B. Autumn (revaccination)	The entire country	Trivalent OAC and monovalent C imported. 15 ecus/dose.	PD_{50} according suitable international codes. Good results.

Note: (1) cost of vaccine and injection free of charge to owner.
(2) ring vaccinations in few outbreak areas. (March 1980)

Country	VACCINATION PROGRAMMES			VACCINES	
	Species vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle Dose Cost	Potency required and results
Italy	A. All cattle above 3 months B. Cattle, sheep and goats sent to alpine pastures. 1981/82 * C: 8,000,000 Sh. and G: 600,000	A. From 15 Sept. to 15 Dec. B. From 1/4 to 30 June	The entire country since 1968 Sheep and goats: The entire territory of Sicily	Trivalent OAC (O_1 A_7 C) (1) 5 cc. 1981/82 * Lit. 350 per dose, total cost: 9,000.000,000	8 PD_{50} measured on cattle (3 groups of 5 cattle per valence - Dilution 1:1; 1:4, 1:16 in buffer)

Note: (1) vaccine and vaccination programme paid by Government.
* for administrative reasons vaccination programme finished in Spring 1982

Country	VACCINATION PROGRAMMES			VACCINES	
	Species vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle Dose Cost	Potency required and results
Spain 1981 C: 2,868,776 Sh./G. 931,849 S: 4,761,960	A. All cattle above 4 months. Sheep & goats destined for transport. B. Swine: compulsory for breeding stock all transported pigs, all pigs. Radius 25 km outbreak.	A. Spring (& autumn) in border provinces. B. Twice yearly for breeding animals.	The entire country	A. Trivalent OAC. 16 Pst. per dose (1). B. 2 types in use: DEAE & oil vaccines 40 Pst. per dose. C. Monovalent C oil vaccine 16 Pst.	Potency testing based on the cattle PD_{50} determination has been started, as reference. Routine: 2 vacc. animals are challenged against field strains; both must remain protected. Results: very successful in pigs.

Note: (1) 50% of the cost of vaccine free of charge; vaccination paid by owner (in case of compulsory vaccination only.).

Country	VACCINATION PROGRAMMES			VACCINES	
	Species vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle Dose Cost	Potency required and results
U.S.S.R.	Cattle above 4 months. Sheep & goats above 1 month, pigs above 2 months. 1981 C: 76,070,140 Sh: 61,972,269 G. 1,354,917	Early spring and autumn	Rep. of Transcaucasus Kazakhstan, Middle Asia with bordering regions of RSFSR and Ukraine.	Mainly Mono-valent and trivalent vaccines. Cattle dose: 5 cc mono-valent: 9 Kopecks trivalent: 27 Kopecks.	Required duration of immunity: 6 months.
Hungary	Cattle & sheep above 2 months of age. Pigs not vaccinated. 1981 C: 372,803 Sh: 914,652	Two programs: Spring and Autumn.	Eastern border provinces.	Trivalent OAC (1) cattle dose: 5 cc sheep dose: 3 cc	Vaccination free of charge.

Note: (1) Vaccine and vaccination free of charge to owner.

Country	VACCINATION PROGRAMMES			VACCINES	
	Species vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle Dose Cost	Potency required and results
Czecho-slovakia	A. All cattle above 3 months Adult sheep, goats and pigs. 1981	During the whole year.	The entire country.	Trivalent OAC	Five cattle per type are challenged by rubbing a virus suspension on the tongue. One generalization tolerated.
Denmark		Total prohibition of vaccination as of 1 January 1977.			
Austria	Cattle, Sheep goats and pigs. 1981 C: 200,000 Sw: 310,000	A. Autumn	Around the FMD Institute (Vienna)	OAC cattle 10 ml sheep 5 ml 15 A. Schill (1)	3 cattle vaccinated with 0.5 ml and 3 cattle with 2 ml of monovalent vaccine are challenged intradermolingually with 10,000 ID50 Maximum number of generalizations admitted: 2.
		B. Spring	Animals to be sent to mountain pastures. Ring vaccination within radius 30 km around affected villages in Lower Austria. Outbreak type O March 1981.		

Note: (1) vaccine and vaccination free of charge to owner.

Country	VACCINATION PROGRAMMES			VACCINES	
	Species vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle Dose Cost	Potency required and results
Turkey	Cattle, buffaloes, sheep and goats above 4 months of age. 1981 C: 1, 901,716 Sh: 3, 377,543	March-May in buffer zones. Ring vaccination all year round. Autumn - young stock in Thrace buffer zones.	A. Turkish Thrace including Istanbul and Celibolu. B. Frontier areas in eastern and southern Anatolia. C. State and dairy farms, feedlots and other exposed areas.	O_1/A_{22} in 1981	9 cattle per batch (3 cattle per type are challenged intradermolingually; 6 controls).
Greece	Cattle, sheep and goats above 3 months of age 1981 Cattle: 22,772 Sh./G: 80,033	Spring campaigns	Frontier areas in Greek Thrace Ring vaccination of outbreak recorded in Aug. 1981	Bivalent O_1/A_{22} provided through FAO	Potency evaluated on Guinea Pigs, the protective dose being above 0.3 ml. (monovalent cattle dose: 3 ml.) Conventional European strains. Stock reserve.

Country	VACCINATION PROGRAMMES			VACCINES	
	Species vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle Dose Cost	Potency required and results
Bulgaria	Cattle and sheep above three months 1981 C: 195,000	Spring	30 km buffer zone along frontiers with Turkey and Greece and at frontier posts.	Biv. O_1/A_{22} (FAO vacc.) of border areas with Turkey. Triv. OA_5C elsewhere (1)	100% protection against generalization in 4 cattle intradermolingual challenge with 10,000 ID_{50}. Seroneutralization index above 3.
Romania	Cattle and sheep above 6 months. 1981 Cattle: 1,245,016 Sheep: 1,431,931 Swine: 247,937	Twice a year (6 months interval) young cattle are revaccinated after 15-21 days.	Frontier districts in the West. Frontier areas in the South and Southeast.	Monovalent vaccines produced against O_1, C, A_5. Cost per dose: 4.32 lei.	The ordinary monovalent dose must contain 8 cattle PD_{50} Satisfactory results.

Note: (1) Vaccine and vaccination free of charge to owner.

Country	VACCINATION PROGRAMMES			VACCINES	
	Species vaccinated	Period of vaccination	Territory covered by vaccination	Valencies Cattle Dose Cost	Potency required and results
Yugoslavia	Cattle for export above 7 months. 1981 C: 97,768	All the year round.		Trivalent OAC 5 ml Doses	
Cyprus	All cattle above 6 months. Sheep and goats above 3 months 1981 C: 11,024 Sh: 182,056 G: 75,108	Early spring and autumn	Entire country in South with O_1/A_{22}		
Malta	Cattle, sheep and goats. 1981 same scheme C: 11,225 Sh: 801 G: 4,141	Winter and Spring	Double vaccination in the entire country in 1978/79. Entire country since 1980.	OAC vaccine (Italy)	

WORLD REFERENCE LABORATORY FOR FOOT-AND-MOUTH DISEASE

THE ANIMAL VIRUS RESEARCH INSTITUTE

PIRBRIGHT, WOKING, SURREY

CUMULATIVE REPORT FOR 1981

During 1981 227 samples from 29 countries have been examined for type of virus. Virus was demonstrated in 143 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	No virus isolated	
GREECE	1	1								
HONG KONG	16	4							7	+ 5 SVD
INDIA	53	8	3	8				17	17	
ISRAEL	4	3	1							
JORDAN	3	3								
KAMPUCHEA	3							3		
KUWAIT	12	1	3					3	5	
LAOS	2	1							1	
LEBANON	3	2							1	
LIBYA	2	2								
MALAWI	12		6						6	
MALAYSIA	17	8							9	
MOZAMBIQUE	6				1	2			3	
NEW ZEALAND	4								4	
NIGERIA	14				5	2			7	
OMAN	11	8							3	
PAKISTAN	3	1							2	
SAUDI ARABIA	9	3							6	
SOMALIA	1	1								
SOUTH AFRICA	11				5	1			5	
SYRIA	1	1								
SUDAN	3		2						1	
TUNISIA	1								1	
TURKEY	3	3								
UNITED KINGDOM	2	2								
ZAMBIA	10				2	6			2	
ZIMBABWE	5				3	1	1			
YEMEN	15	11							4	
TOTAL	227	63	15	8	16	12	1	23.	84	+ 5 SVD

16.8% of samples were typed as original suspensions

83.2% of samples were typed as tissue culture

TRUST FUNDS 9111 (EEC) AND 9097 (non-EEC) - STATEMENT OF INCOME AND EXPENDITURE SINCE DIRECTOR-GENERAL'S APPEAL IN 1978

TF 9111 (EEC)

Income	US$
Balance 31/12 1978	75 538.97
EEC contribution 1979/80	962 171.98
Interest 1979/80	36 201.12
Interest 1981	42 470.00
	1 116 382.07

Expenditure	US$
1979 -700 000 bivalent doses A22/0$_1$ vaccine (Turkey 400 000, Bulgaria 250 000 and Greece 50 000)	294 220.50
-Centrifuge for Athens FMD Institute	7 769.08
1980 -720 000 doses bivalent A22/0$_1$ vaccine (Turkey 450 000, Bulgaria 200 000 and Greece 70 000)	302 000.57
1981 -650 000 doses bivalent A22/0$_1$ vaccine (Turkey 400 000, Bulgaria 200 000 and Greece 50 000)	292 500.00
1982 -700 000 doses bivalent A22/0$_1$ vaccine (Turkey 400 000, Bulgaria 250 000 and Greece 50 000) (US$343 000 of which US$ 163 000 paid from TF 9097)	180 000.00
	1 076 490.15

Balance at 12/3/82 US$ 39 891.92

TF 9097 (non-EEC)

Income	US$
Balance 31/12/1978	161 854.42
Contributions 1979/1980	
Austria	30 566.00
Norway	3 926.57
Bulgaria	19 872.00
Switzerland	24 180.00
Finland (Jan.1981)	9 714.00
Yugoslavia (Jan.1981)	16 621.72
Yugoslavia (Oct.1981)	16 623.49
Interest 1979/80	14 000.00
Interest 1981	40 918.00
	338 276.20

Expenditure	US$
1979 -secretarial assistance in connection with campaigns	2 954.80
-duty travel - campaigns	3 350.85
-vaccine for Malta	5 701.19
-Laminar flow for Bulgaria carry-over from 1977	1 654.55
-Project servicing costs (6%) on items other than vaccine	819.68
1980 -duty travel - campaigns	995.25
-sphere valves - Bulgaria	1 123.46
-Project servicing costs (6%)	342.07
1981 -duty travel - campaigns	2 074.00
-equipment (typewriter)	1 000.00
1982 -vaccine (to meet deficit TF 9111)	163 000.00
	183 015.85

Balance at 12/3/82 US$ 155 260.35

Appendix 4

THE ANIMAL VIRUS RESEARCH INSTITUTE

W.R.L. Information Sheet No. 31 - FMD Type O in Greece 1981

Foot-and-mouth disease virus Type O was reported in cattle at the end of August 1981 on a farm in the Polyanthos commune, Rodopi department (OIE Information Note 103) in Greek Thrace. Four other outbreaks occurred between the end of August and the beginning of September, all in the same commune of Polyanthos and all involving cattle, (OIE Information Notes 105 and 107). The virus concerned was identified as type O by the Foot-and-Mouth Disease Institute in Athens (OIE Information Note 103).

A sample of foot-and-mouth disease virus (WRL Ref. O/Gre/1/81) was received from Dr. Brovas at the beginning of September, 1981 isolated from Komotini, Northern Greece, and was examined in unilateral complement fixation tests comparing it with several reference strains.

Reference Strains

O_1BFS 1860: received in November 1968 as bovine tongue epithelium from an outbreak in Wrexham, U.K.

O_1 Lausanne/65 received from Dr. Fontaine, IFFA, Mérieux, France

O_2 Brescia received from Dr. Traub. The O_2 strain caused epizootics in Great Britain and in Europe from 1937-57.

O/Turkey 1/78 (O Manisa) received from Dr. Boz. The original outbreak occurred in Manisa Province in Turkey in 1969.

O/Austria 1/81 received from Professor Kubin in March 1981. The outbreak occurred in pigs in St. Pölten district, Lower Austria.

O/Greece 1/73 received from Dr. Brovas from an outbreak in Evros department, November 1972.

Results

'r values

Viruses / Sera	Gre 1/73	Gre 1/81	BFS1860	O_1Lausanne	O_2Brescia	Turk 1/78	Austria 1/81
O_1BFS1860	1.07	0.93	1.0	1.26	0.63	0.42	0.46
O_1 Lausanne	0.44	0.83	0.46	1.0	0.26	0.20	0.26
O_2 Brescia	0.29	0.33	0.23	0.37	1.0	0.21	0.17
O/Tur/1/78	0.57	0.81	0.75	0.75	0.50	1.0	0.52
O/Aus/1/81	1.00	0.80	0.34	0.27	0.31	0.68	1.0

Comments

These preliminary results indicate:-

(1) A similarity between Gre 1/73 and Gre 1/81
(2) Both show a similar relationship with O/Austria 1/81 and O_1OBFS 1860 although recent work at Pirbright has demonstrated Austria 1/81 to be different from the O_1 subgroup.

Specific antisera are being produced and investigations are continuing and being extended to include other type O isolates in an endeavour to clarify the situation. Results will be published in due course.

October 1981

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R.W. Osborne

THE ANIMAL VIRUS RESEARCH INSTITUTE

Appendix 5

W.R.L. INFORMATION SHEET No.32

Preliminary serological studies on some type 'O' FMDV strains occurring about the Middle East during 1981

Although the incidence of type O FMD in the world has remained stable in recent years, a new strain was isolated in Austria in March 1981 which it appears may be a member of a serological group of strains more widespread than was thought.

This strain has been shown to be different from the O_1 subgroup both in serological and in biochemical tests (King et al., (1981), Nature 293, 479-480.). Serological investigations of a recent Greek isolate has shown this virus to have some relationship with that from Austria (WRL Information Sheet No. 31), and a serological relationship was also demonstrated with the Austrian strain and a strain isolated in Israel earlier this year (Lombard, M. personal communication).

Isolates from five countries around the Middle East have now been examined to ascertain whether any of these also had affinity with that from Austria. Unilateral complement fixation tests have been carried out comparing these isolates with standard reference strains.

The following current strains were included in this study:-

O/Israel 1/81 received February, 1981 from an outbreak in Ramallah district.

O/Jordan 1/81 received in June,1981 from an outbreak in Maan.

O/Lebanon 1/81 received in September, 1981 from an outbreak in Bekaa.

O/Libya 1/81 received in October, 1981 from an outbreak in Tripoli.

O/Syria 1/81 received in June, 1981 from an outbreak in Aleppo.

The reference strains were:-

O_1/BFS 1860; O_1 Lausanne/65; O_2 Brescia; O/Turkey 1/78; O/Austria 1/81.

The details of origin of these were published in WRL Information Sheet No. 31.

Results

From these one-way tests:-

(1) O/Israel 1/81 and O/Syria 1/81 appear:-
  (a) related to each other
  (b) to be different from O_1BFS 1860 and O_1 Lausanne
  (c) to demonstrate a relationship with O/Austria/81 strain

(2) O/Jordan appears to be related to O/Austria 1/81 and O/Turkey 1/78

(3) O/Lebanon 1/81 appears to be related to O/Turkey 1/78.

Conclusions

These preliminary results suggest the emergence of strains differing from the original O_1.

27th February 1982

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