REPORT

Budapest,
Hungary,
20-21 November
1996

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

Fifty-ninth session

Food
and
Agriculture
Organization
of
the
United
Nations

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

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FIFTY-NINTH 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

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APPENDICES

Introduction

The Executive Committee of the European Commission for the Control of Foot-and-Mouth Disease (EUFMD) held its Fifty-ninth Session at the Central Animal Health Institute, Budapest, Hungary, on 20 and 21 November 1996.

Members of the Committee present:

Dr. K.C. Meldrum, U.K. Chairman
Dr. R. Marabelli, Italy, First Vice-Chairman
Dr. N. Voetz, Germany, Second Vice-Chairman
Dr. B. Nordblom, Sweden
Dr. B. Vallat, France
Dr. L. Celeda, Czech Republic
Dr. M. Aydin, Turkey

Observers:

Dr. A.I. Donaldson, Pirbright Laboratory, U.K. Chairman, Research Group
Dr. T. Balint, CVO, Hungary
Dr. J. Westergaard, EC, Brussels
Dr. P. van Geldorp, Counsellor EC, Hungary
Prof. Y. Kostadinov, CVO, Bulgaria
Dr. A.J.M. Garland, U.K. Consultant

FAO

Dr. Yves Cheneau
Chief, Animal Health Service
Animal Production and Health Division

Secretariat

Dr. Y. Leforban
Secretary, EUFMD
Animal Production and Health Division, FAO

Ms. J. Raftery
Administrative Assistant, EUFMD
Animal Production and Health Division, FAO

Dr. Balint welcomed the Committee and observers to Hungary and especially to the Central Animal Health Institute where Dr. Lajos Tekes, Director, had kindly agreed to host the meeting. He wished them success in their deliberations and a pleasant stay in Hungary.

Before presenting the Agenda, the Chairman welcomed the members of the Committee and the observers and he thanked Dr. Marabelli for having agreed to chair the Fifty-eighth Session of the Committee which had been held in Milan in April 1996. In referring to the fact that some years previously the question of closing the Commission had been raised, he stated that he was delighted that this had not happened. The Fifty-ninth Session of the Executive Committee was of particular importance because of the proposed discussion of the findings and recommendations of the EUFMD/EC mission to Turkey, the recent epidemic in the Balkans, and the outbreak in Bulgaria.

The Chairman stressed the necessity to come to some succinct opinions on the EUFMD/EC mission to Turkey, and in addition he invited the Committee to approve the proposed amendments to the Constitution so that they could be forwarded in time for consideration at and adoption by the Thirty-second Session to be held in Rome from 2 to 4 April 1997.

Before the adoption of the Agenda, the Chairman stated that the Commission was very happy with the tremendous support of the Secretary, Dr. Yves Leforban, during the last 12 months.

Item 1 - Adoption of the Agenda

The following agenda was presented:

1. Adoption of the Agenda
2. FMD situation in Europe: Balkans, Greece, Bulgaria
3. Report of the fact-finding EUFMD/EC mission to Turkey (September-October 1996) and proposals for FMD control in Turkey
4. Report on the activities of the Research Group during 1996
5. FMD laboratories:
   - report of the WRL
   - national laboratories
6. Progress in the implementation of Contingency Plans in Member countries
7. Availability of vaccines for emergency vaccination in Europe
8. Amendments to the Constitution
9. Scale of contributions and membership of the Commission
10. Financial matters: provisional accounts 1996 and proposed budget 1997
11. Agenda for the 32nd Session
12. Any other business
13. Adoption of the draft report

Item 2 - FMD situation in Europe: Balkans, Greece, other regions

The situation in Turkey is reviewed under Item 3. The Secretary presented information on the recent type A outbreaks in Albania, Macedonia and Yugoslavia (Appendix 1).

He informed the Committee that a serological survey jointly organized by EC and EUFMD was planned in the countries where outbreaks had occurred with a view to checking for the presence of antibody. The Chairman felt that there was too much emphasis on serosurveillance and too little on clinical observations. He feared that some of the tests to be carried out in connection with the serosurveillance survey had not yet been fully validated (i.e. tests for antibodies to non-structural viral proteins). Dr. Donaldson commented that the key to the serosurveillance survey lay in its design and Dr. Westergaard stated that although this was a challenging exercise, the survey is a valuable means to determine whether trade can be resumed from an area. Dr. Cheneau felt that sufficient time had been devoted to discussion of the occurrence of the disease and too little emphasis was being placed on preventive measures to avoid its reintroduction. Such measures include prohibition of importation of meat from infected countries and preparation or updating of contingency plans.

The situation in Greece was then reviewed. Dr. Westergaard explained that a total of

39 outbreaks (type 0) had occurred and no case had been observed since 30 September (Appendix 1) and the serosurvey carried out in Rhodopi Prefecture had given negative results. It is the intention of Greece and EC to extend the serosurvey to Evros Prefecture. He also stated that the laboratory of Athens will be newly equipped and that eight stations with close links with the national laboratory (four in Rhodopi and four in Evros) will be established to maintain surveillance in the area.

Dr. Garland, who had taken part in the mission to Bulgaria to investigate the recent type 0 FMD outbreak, briefed the Committee on the findings of the mission (Appendix 1). The Bulgarian authorities were to be congratulated on the speed and efficiency of the measures employed to control the outbreak and the rapidity of notifying the international authorities. Stamping out had been applied with strict quarantine and excellent cooperation between the veterinary, police, military and municipal services.

Dr. Kostadinov, CVO Bulgaria, gave an update on the situation since the outbreak. He stated that (i) the origin of the outbreak was still unknown, (ii) the slaughter of animals in the infected village had been completed and the meat heat treated, (iii) no new case of FMD had been observed up to 19 November, (iv) all farmers had been compensated and (v) the total cost of the outbreak was 24 million Leva. He concluded by stating that the situation was very difficult and the Bulgarian authorities were hoping to obtain assistance from EC. The Secretary informed the Committee that emergency aid of US$7,500 had been given to Bulgaria by OIE and reminded the Committee that it had been agreed by the Fifty-eighth Session to provide reagents to the Sofia laboratory.

The diagnosis of FMD type 0 has been confirmed by the WRL, Pirbright. Dr. Donaldson provided information on the characterization of the strain by nucleotide sequencing which indicates that the 1996 Bulgarian isolate is very closely related to recent isolates from Turkish Thrace, Greece and the Middle East (less than 2% difference in nucleotide sequences) and that the strain is antigenically closely related to the 01 Manisa vaccine strain.

It was the view of the Executive Committee that there was no need for prophylactic vaccination either in Greece or Bulgarian Thrace.

Recommendation

The Chairman proposed that a letter be sent to member countries drawing their attention to (i) the Minimum Conditions for importation of meat as laid down in Chapter 2.1.1 of the OIE International Animal Health Code, (ii) the importance of sending a sufficient number of samples to the WRL in case of outbreaks, and (iii) the use of a monovalent vaccine with a minimum value of 6 PD50 per dose for emergency vaccination.

Item 3 - Report of the fact-finding EUFMD/EC mission to Turkey (September-October 1996) and proposals for FMD control in Turkey

The draft report of the mission had been circulated to the Committee members and Dr. Garland reported on the principal findings. The main outcome can be summarised as follows:

i. control of animal movement is extraordinarily difficult under the present situation in Turkey

ii. recent outbreaks of FMD in Thrace were due to illegal movements of animals.

iii. identification of animals is a prerequisite for the control of animal movement and should be urgently pursued.

iv. vehicle cleaning and disinfection should be improved, and particularly that of the interior of animal transport vehicles.Ideally, facilities should be established at the level of each village and used routinely.

v. the concept of independent quality control of FMD vaccine is fully supported.

vi. farmers consider FMD as important and are prepared to contribute to the cost of the vaccination.

vii. there is need for research work on the role of sheep in the maintenance and dissemination of FMD.

viii. the participation of private veterinarians in official vaccination campaigns should be encouraged.

He then presented the recommendations of the mission which cover three essential points:

1) vaccination
2) control of movement of animals, and
3) international reporting

The Committee recognized that Turkey is under constant threat of the risk of introduction of FMD (and other OIE list A diseases) from the countries to the east. In this respect regional cooperation is to be encouraged.

The main recommendation was to resume preventive vaccination in Thrace for a minimum of three years with independently quality controlled vaccine. The recommendation had been approved by Turkey, Greece and Bulgaria at the Tripartite meeting in Ankara in October 1996.

After lengthy discussion the Committee agreed to this recommendation with the exception of Dr. Vallat who had some reservations. Summarising the views of the Committee, the Chairman stated that it was disappointing to see that vaccination must be resumed in Thrace. However, this proposal must be seen as an interim measure which should be reviewed every year. The Committee also considers that vaccination in Thrace should not be regarded separately from the package of recommendations for the determined improvement of the overall control of FMD in Turkey, most particularly in the control of animal movement, in animal identification and registration, in vehicle disinfection and in the vaccination campaign in the Strategic Vaccination zone in Western Anatolia.

There is a need for the safety testing of non-FMD vaccines produced in Turkey to ensure that they are not a vehicle for the introduction of FMD virus into Thrace.

In view of the large sheep population in Turkey and the uncertainty of their role in the epidemiology of FMD, the Committee recommended that their role in the dissemination of the disease should be discussed at the next meeting of the Research Group.

It was finally agreed that the practical arrangements for support to Turkey will be discussed at a meeting to be held with the EC DGVI Directorate in Brussels on 5 December 1996, with the participation of the Chairman, the Secretary, and representatives from Turkey. At the same time, the opportunity will be taken to discuss how the use of funds from TF 911100 could be agreed by the Commission.

Item 4 - Report on the activities of the Research Group during 1996

Dr. Donaldson presented this Item (Appendix 2). He stated that the Research Group meeting held in Israel had been very successful considering the number and high level of the scientific papers presented, and the wide range of countries represented.

Item 5 - FMD laboratories:

- report of the WRL

Dr. Donaldson presented the report of the WRL activities during 1996 (Appendix 3). He stated that 32 countries had taken part in Phase XIV of the FAO Collaborative Laboratory Study and that during Phase XV a panel of reference sera to types O, A and C will be prepared and supplied to laboratories for testing by ELISA and by neutralisation. The intention is to define a range of definitive reference sera.

- national laboratories

The Secretary presented the situation of quality assurance in national FMD laboratories and stated that there was a need for coordination between international organizations to decide which authority should be in charge of assessing quality assurance in FMD laboratories. The question of ensuring adequate disease security standards in FMD laboratories was raised. In respect of the new laboratory in Bulgaria it was agreed that a formal request for security inspection could be sent to EC because it will be EC funded.

Regarding the third recommendation of the Research Group meeting in Israel (concerning laboratories which either refused to participate or which failed to pass quality assurance tests) it was suggested that the phrasing of this recommendation be reformulated so as not to penalise the trade of the country but only the laboratory which failed to pass proficiency testing.

Item 6 - Progress in the implementation of Contingency Plans in Member countries

The Secretary presented the situation of contingency plans in the Balkans. He stated that despite the fact that contingency plans existed in Bulgaria, they had apparently not been circulated at field level. However, the measures taken for the control of the outbreak were considered as adequate, especially as regards collaboration between the Veterinary Services, other services, the army and the police.The mission had recommended that improvements were needed in the design and implementation of the serological surveillance programme.

The epidemic in the west Balkan countries revealed a lack of preparedness to cope with FMD and much progress remains to be achieved in these countries in the preparation of CP's and in making them operational.

A Workshop on Emergency Preparedness and Contingency Planning is scheduled in 1997

for Central/Eastern Europe. France has already agreed to organise training in this field. Closer collaboration with the activities of the EC Multi-country PHARE programme is recommended.

Recommendations

1. The Committee recommended that each country should have their Contingency Plans updated regularly and validated with simulation exercises. The Commission could provide advice if required.

2. A reminder should be sent to member countries, especially to those who had outbreaks of FMD recently, drawing their attention to the necessity to prepare Contingency Plans as soon as possible in order to be in a position to cope with any future outbreak.

Item 7 - Availability of vaccines for emergency vaccination in Europe

The Secretary introduced this Item (Appendix 4) and presented the preliminary conclusions of the vaccination campaign in the Balkans:

1. vaccination remains a major tool for the control of FMD especially in the situation where sanitary control measures are weak,

2. despite the delay between the decision to vaccinate and actual vaccination, the campaign in the Balkans proved to be effective in stopping spread of the disease.

The first significant withdrawal of viral antigen from the EU antigen bank since its inception took place in response to the regional FMD emergency which arose in the Balkan countries during 1996. Monovalent A22 vaccine was reconstituted with funding from the EC for use in ring vaccination. 260,000 doses of aluminium hydroxide-saponin vaccine and 110,000 doses of oil emulsion vaccine were produced and utilised in Albania. In addition 100,000 doses of aluminium hydroxide-saponin vaccine were supplied to Yugoslavia (Kosova) by EUFMD but were not applied and remain available to keep for use elsewhere. An additional 120,000 doses were reformulated from the EU antigen bank and remain with the manufacturer. It was agreed that if the EC did not pay for this vaccine, then the EUFMD would arrange for early sale in view of its short shelf life. The residual vaccine would be carefully monitored and a decision would be required as to the future of this vaccine. The position would be brought to the attention of the EC in Brussels.

Although the deployment of vaccination in Albania had been associated with the control of the outbreaks in that area, concern was expressed at the length of time elapsing between deciding to ring vaccinate and the supply of vaccine. The delay had taken 11 to 26 days, attributable to various agencies including: the EUFMD (the bureaucracy of the tendering system); the EC (the need to secure a Commission decision on financial support from Trust Fund 911100 for reformulation and release of antigen); the manufacturers delivery time (normally 2-3 weeks with a minimum of 4 days but with a doubling of the cost); recipient countries (delays due to insufficient readiness or lack of essential equipment).

Bulgaria increased their contract with the Vladimir Institute in Moscow up to 140,000 monovalent doses of types 01 and A22 vaccine, including 50,000 doses of aluminium hydroxide-saponin and 20,000 doses of oil vaccine of each serotype, the balance being held as antigens for formulation and supply on request.

The Government of Croatia had purchased 20,000 monovalent doses of both types 01 and A22 vaccine from a commercial source.

The German vaccine bank contained sufficient antigens of 10 strains to make 1 to 1.4 million doses of vaccine of each strain and is considering to increase the stock of fully formulated vaccine from 100,000 to 200,000 doses for the most important strains.

The meeting endorsed the Secretary's proposal to circulate a new questionnaire early in 1997 to enable an assessment of the status and preparedness of the several antigen vaccine banks currently existing in Europe and the availability of vaccines/antigens at the national level which would be presented at the Thirty-second Session of the Commission.

It was also agreed that a paper should be prepared for the same meeting, reviewing the whole field of emergency vaccination in Europe and including the topics of:-

- the status of European vaccine banks and opportunities for collaboration and rationalisation

- the optimisation of the speed of response of the current mechanisms for deciding upon emergency vaccination and supplying vaccine and vaccination equipment

- the possibility of a rolling contract for the supply of vaccine/antigen

- the balance between cost and delivery time for reformulating antigens and the cost of maintaining fully formulated vaccine.

- the balance between aqueous aluminium hydroxide-saponin vaccines (suitable for ruminants) and oil emulsion vaccines (suitable for ruminants and pigs)

- the potential for alternative methods of antigen storage, including freeze drying

- the development of decision models and cost-benefit analysis for emergency vaccination

- the implications of liability issues for antigens produced by one manufacturer and formulated/filled as vaccine by another.

Item 8 - Amendments to the Constitution

As the amendments had been reviewed up to Article VI, the Committee started with Article VII. With the exception of minor modifications in respect of Article II, paras 1 and 2, the Committee adopted the amendments and it was agreed that they be circulated to the member countries as stipulated in paragraph 3, Article XIV, of the Constitution.

Item 9 - Scale of contributions and membership of the Commission

The Secretary presented the Tables for the present and the proposed new scale of contributions for member countries which had been calculated according to the new criteria as accepted by the 58th Session of the Executive Committee.

Following a brief discussion, it was recommended that the secretariat should prepare a

document drawing attention to what was agreed in this respect at the Thirty-first Session and incorporating all background information on which the new calculation had been based to be circulated to member countries before the Thirty-second Session.

Item 10 - Financial matters: provisional accounts 1996 and proposed budget 1997

Before inviting the Secretary to present Item 10 (Appendix 5), the Chairman complimented the Administrative Assistant on the excellent support she had provided over the past year despite the heavy workload caused by the epidemic in the Balkans.

The accounts for the three Trust Funds monitored by the Secretariat were presented by the Secretary.

TF904200 - proposed budget for 1997

The Committee agreed that the following additional amounts be included:

The EUFMD annual contribution to the WRL for 1997 and 1998 should be increased from the present amount of US$20,000 to US$30,000

Support for Phase XV of the Collaborative Laboratory Study 1997/98 - US$18,000

Support for the purchase of two freezers for a serum bank at the WRL - US$11,000

The proposal to earmark US$20,000 for temporary secretarial assistance for a period not to exceed 6 months was also approved.

The status of contributions for 1996 and outstanding arrears were then reviewed.

It was agreed by the Committee that a letter should be sent to Albania and Bulgaria requesting them to meet their financial obligations.

Regarding Yugoslavia, the meeting agreed that a call for contributions for 1997 should be sent and that they should be invited to make a contribution towards the arrears which would be compatible with the FAO Regular Programme procedures for collecting arrears.

The Secretary informed the Committee that the amount spent under TF904200 in connection with the provision of equipment to the Balkan countries will be transferred to TF911100.

The accounts and budgets for the three Trust Funds were then adopted by the Committee.

Item 11 - Agenda for the 32nd Session

The Agenda for the Thirty-second Session was agreed as presented.

Item 12 - Any other business

The Secretary informed the Committee of the possibility of obtaining the services of an

Associate Professional Officer (APO) to assist him in his work especially in connection with computerised dissemination of information. Such assistance would be free of charge to the Commission, the cost being covered by the country providing the Officer. Dr. Cheneau then explained the FAO APO programme. The terms of reference for this post would be prepared by the Secretary and circulated to the Committee who agreed to the proposal and promised to provide the names of some suitable candidates for this work.

The Secretary proposed that a list of FMD experts should be established to participate in missions in emergency situations. The Chairman suggested that two lists be drawn up -

1. for scientists/officers employed by the Government who would participate on the basis of provision of travel costs and DSA, and

2. for private and retired experts for whom an honorarium could be requested.

This was accepted by the Committee who agreed to put forward nominations.

The involvement of scientists from private companies in Sessions of the Research Group was raised and it was agreed that:

- scientific participation could be considered on a case by case basis,
- however, such participation should not have any commercial implications,
- sponsorship of EUFMD meetings is not acceptable
- organisation of publicised social events should be avoided

Item 13 - Adoption of the report

The draft report was adopted subject to the incorporation of the modifications agreed, and to any necessary editorial changes.

In closing the meeting, the Chairman thanked the Hungarian authorities for the very warm hospitality extended to the members of the Committee and to the observers and for the excellent facilities provided for the conduct of the meeting.

Appendix 1

FMD SITUATION IN THE NORTH OF THE BALKANS AS OF 02 OCTOBER 1996

Yves Leforban, Secretary, EUFMD

According to the information received from the CVOs, the disease is under control in the three countries, Albania, FYR of Macedonia and FR of Yugoslavia (Kosovo) and strict measures for surveillance are still in force - see attached map.

Albania

FMD outbreaks: The last clinical case occurred on 22 June and no case has been observed since then. A programme of elimination by slaughter of the susceptible animals in the households/villages which had been infected has started. A total of 1,266 out of 2,855 infected animals had been destroyed on 30 September. The Government of Albania has authorized an increase in the compensation to the farmers from 25%, as established initially, to 40 %, in order to speed up the elimination of all possibly infected animals by the end of the year. If elimination is not completed by this time, other compulsory measures will be taken to slaughter the remaining animals. The Order for slaughter in the infected villages goes from the periphery to the center. Exit of animals from the infected zone is prohibited and the check points are still active at the exit of the zone.

Vaccination: 266,048 animals (59,234 cattle, 137,190 sheep, 62,202 goats and 7,422 pigs) have been vaccinated during the first round of vaccination between 20 June and 12 July. The second round of vaccination started on 05 August and finished on 21 September. 285,263 animals have been vaccinated (61,742 cattle, 156,158 sheep, 59,814 goats and 6,949 pigs. A total of 370,000 bovine doses has been used to complete the two rounds.

Surveillance zone: The surveillance zone has been suppressed along the border with Montenegro. The other surveillance areas have been maintained. No movements are authorized between the zones until it can be ensured that no virus circulates i.e. after the sero-surveillance. However, restriction of movements of animals in and outside the zones is a general problem in Albania. For example, difficulties arose in preventing the entry of animals into the vaccination zone. A request has been made to the Veterinary Services to allow goats (5,000-6,000) to enter the vaccination zone.

Laboratory training:

- Albania is prepared to organize a workshop on ELISA at the National Institute of Tirana if requested by IAEA.
- The multicountry PHARE programme will provide support to Albania for training.
- A veterinary agreement has been signed with Italy. Through this agreement, Italy will provide expertise to Albania in several fields of Veterinary Science including laboratory know how.

FYR of Macedonia

FMD outbreaks: The last clinical case was observed on 13 July. The cattle population in the 18 infected villages has been stamped out and repopulation of these infected villages has started with vaccinated cattle from the vaccinated zone.

Vaccination: The second round of vaccination has been completed. Approximately the same number

of cattle (120,000) has been vaccinated as during the first round. Vaccinated cattle should have been marked by one notch (hole) in the right ear. However, problems occurred for marking cattle due to the utilization of inappropriate ear pliers and, therefore, marking of vaccinated animals has not yet been properly carried out.

Regarding the vaccination of sheep and other susceptible species, the Veterinary Service of Macedonia considers that as the disease is under control (two months without cases), there is no need at present to vaccinate other susceptible animals.

Surveillance zone: strict surveillance is being maintained including around the "social farms" which have been vaccinated.There are no proper figures available on the number of animals in the different districts/zones. The figures for the number of vaccinated cattle by district are also inaccurate. The FYR of Macedonia should provide these figures to the EUFMD and EC without delay.

Serosurvey: The collection of serum samples to estimate the level of antibodies following vaccination has started but the figures on the number of samples collected/tested before and after vaccination are not available. Kits for detection of antibodies by ELISA are now available in Skopje Laboratory (for testing 15,000 sera). Before starting a large scale sero-survey, the FYR of Macedonia should await the recommendations of the expert mission which is proposed specifically for preparing this serosurvey (see below).

Laboratory training: two specialists have already been trained on ELISA in Tübingen but additional training by IAEA would be welcome (see recommendations of the Research Group meeting, Appendix 2).

FR of Yugoslavia

FMD outbreaks: FMD has been reported by the Veterinary Service of the FR of Yugoslavia in 13 communes of Kosovo and the last report was on 2 August. Since then two suspicions occurred, but they were ruled out by the National Laboratory. Only the stamping out method has been applied, 3,496 animals were destroyed, i.e. 2,298 cattle, 734 sheep and goats and 496 swine.

234 cattle blood samples collected in Kosovo have been sent to the WRL. A second round of samples was collected on the same animals. The results provide no evidence of active FMD infection in Kosovo.

Surveillance: Clinical inspection and prohibition of the exit of animals from the protection and surveillance zones are still in force. Animals are slaughtered in the zones and meat is also consumed in the same zone. Check points at the exit of Kosovo are strictly maintained and animals and animal products from Kosovo are not allowed out of the area.

200,000 sheep are now in three different mountains situated in the protection zone, surveillance zone and "free zone" but these animals will return to the same zone in November.

Coordination of the control and surveillance measures in the region

Regional Committee/meetings

A regional Committee has been established to coordinate the measures in the three countries. The Committee held three meetings with the participation of the three CVOs and of the EC, OIE, and EUFMD. The information given above was provided by the CVOs at the meeting held in Belgrade

on 02 October 1996.

Vaccination of sheep coming back from mountain pastures.

All countries stated that it is not their intention to vaccinate these animals. They consider that the disease is now under control in the previously infected areas.

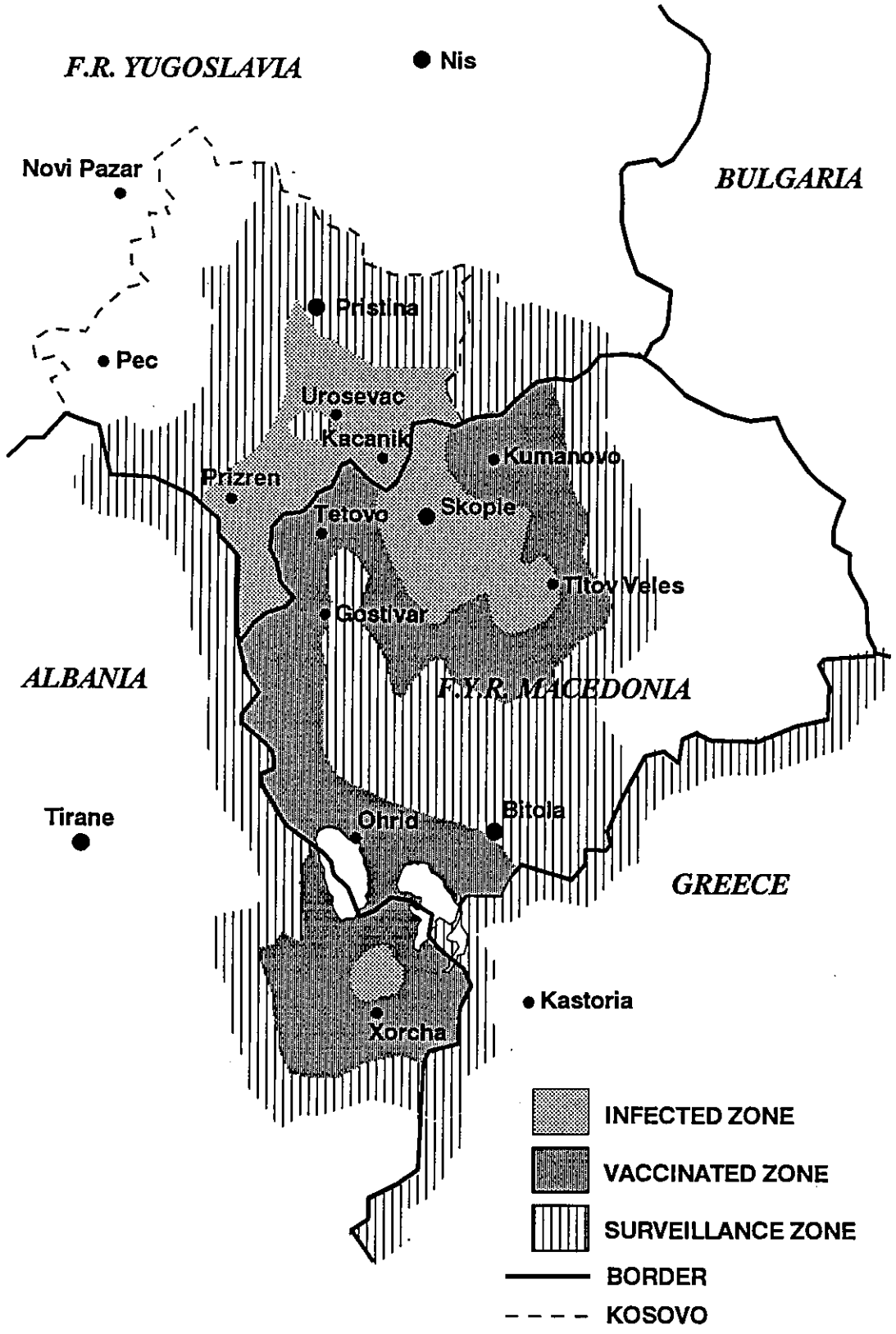
Serosurvey:

A serosurvey has been proposed by the regional Committee meeting to confirm that there is no circulation of the virus in the region with the following steps:

1- A mission of experts visit the three countries to prepare a programme for the survey.
2- The serum samples should be collected by the national authorities under the supervision/coordination of one expert and according to the programme as established under 1.
3- Testing of the samples by ELISA in recognized EC laboratories.
4- Analysis of the results at the national and regional levels.

At the time of the meeting, EC experts had visited the three countries to establish the design of the serosurvey, and it will be jointly organized by the EUFMD Commission and EC.

FMD Zones in Albania, FYRO Macedonia and FR Yugoslavia



FOOT AND MOUTH DISEASE

Description of outbreaks

An overview of the situation as at 4 October 1996 is presented in Table 1 below.

Table 1 : Outbreaks of FMD in Evros/1996

Nr.and type of Outbreak	Location	Dates of		Destroyed animals		
		Suspicion	Confirmation	Bov.	S/G	Pigs
96/01-Primary	Dikella	03.07.96	07.07.96 (1)	2	63	-
96/02-Second.01	Makri	04.07.96	07.07.96 (1)	-	332	-
96/03-Second.01	Makri	04.07.96	07.07.96 (1)	-	98	-
96/04-Primary	Evros Delta	14.07.96	25.07.96 (1)	247	-	-
96/05-Second.04	Evros Delta	14.07.96	25.07.96 (1)	685	-	-
96/06-Second.07	Thyrea	29.07.96	05.08.96 (1)	11	140	-
96/07-Primary	Isaakio	30.07.96	05.08.96 (3)	-	531	-
96/08-Primary	Isaakio	31.07.96	05.08.96 (3)	11	-	-
96/09-Primary	Alexandroupolis	31.07.96	05.08.96 (3)	-	265	-
96/10-Second.07	Didimoticho	31.07.96	05.08.96 (2)	-	95	-
96/11-Primary	Peplos	01.08.96	05.08.96 (3)	77	-	-
96/12-Second.10	Didimoticho	03.08.96	05.08.96 (2)	9	-	-
96/13-Second.08	Isaakio	03.08.96	05.08.96 (2)	-	375	-
96/14-Second.04	Ferres	03.08.96	05.08.96 (3)	-	500	-
96/15-Second.06	Thyrea	06.08.96	07.08.96 (2)	25	50	-
96/16-Second.10	Didimoticho	06.08.96	07.08.96 (2)	-	248	-
96/17-Second.12	Karoti	08.08.96		11	-	-
96/18-Second.14	Pilea	10.08.96		-	325	-
96/19-Second.07	Isaakio	11.08.96		11	-	-
96/20-Second.07	Isaakio	12.08.96		39	-	-
96/21-Primary	Ardanio	12.08.96		11	-	-
96/22-Primary	Didimoticho	13.08.96		296	-	-
96/23-Second.16	Didimoticho	13.08.96		-	107	-
96/24-Second.15	Thyrea	18.08.96		9	21	30
96/25-Second.16	Didimoticho	18.08.96		40	-	-
96/26-Second.13	Isaakio	18.08.96		2	200	-
96/27-Primary	Thymaria	28.08.96	(4) & (5)	-	197	-
96/28-Primary	Kipi	29.08.96		26	-	-
96/29-Second.28	Gemisti	02.09.96		-	184	-
96/30-Primary	Ardanio	02.09.96		-	161	-
96/31-Second.26	Isaakio	03.09.96		4	-	-
96/32-Second.29	Gemisti	09.09.96		-	233	-
96/33-Second.28	Kipi	10.09.96		-	82	-
96/34-Primary	Poros	12.09.96		-	179	-
96/35-Second.30	Vrisoula	13.09.96		-	78	-
96/36-Second.31	Didimoticho	13.09.96		-	317	-
96/37-Second.30	Ardanio	16.09.96		120	-	-
96/38-Primary	Loutros	20.09.96		192	-	-
96/39-Second.35	Peplos	30.09.96		-	276	-

(1) : Confirmation by virus isolation in Pirbright WRL.
(2) : Confirmation by clinical examination and/or epidemiological relation.
(3) : Actions taken on clinical symptoms.Confirmation from Pirbright pending.
(4) : Clinical confirmation and appropriate actions on date of suspicion.
(5) : Laboratory confirmation not available for any outbreak.

REPORT OF THE EUFMD/EC MISSION TO BULGARIA 31 OCTOBER TO 4 NOVEMBER 1996

Introduction

One outbreak of FMD was notified by the Bulgarian authorities on 26 October 1996 in the village of Malko Sharkovo, Municipality of Buliarovo, District of Iambol. A joint EUFMD/EC mission visited Bulgaria from 31 October to 4 November to investigate the situation. The mission was composed of Y. Leforban, Secretary EUFMD, V. Angot, EC, DG VI, Brussels, T. Garland, Consultant, Pirbright U.K.

BACKGROUND

24 Oct 96 During a weekly surveillance visit the veterinary technician observed suspected clinical signs of FMD in a collective cattle herd. In response to questioning, the herdsman indicated that lack of appetite had been observed in a few animals the previous evening.

25 Oct 96The Deputy Director of Vet Services of Iambol District confirmed the suspicion of FMD in the morning.

The animals were immediately isolated and a team from the Sofia Laboratory arrived in the afternoon to collect samples and they also confirmed the clinical suspicion. The village was put under quarantine, the police and army were alerted and checkpoints with disinfection points established at exits from the village.

Details of the outbreak are as follows:

-number of animals in the infected herd 35 cattle belonging to 25 owners
-number of sick animals 11 cattle i.e. nine with high temperature and two with vesicles of the oral cavity.
-age of the lesions: two to three days

26 Oct 96 - The laboratory diagnosis in Sofia confirmed FMD type 0.
- A local control centre was established under the authority of Dr Kozorov, Deputy Director (Animal Health) of the National Veterinary Service.
- Quarantine measures were confirmed and other control measures enforced (see below).
- Inspection of animals in the village is carried out daily and the sick animals are isolated

27-29 Oct 96 - Infected and in-contact animals were slaughtered and destroyed: 47 cattle from the infected herd were destroyed on 28 Oct and 26 cattle, 7 lambs and 11 goats on 29 October.
- Inspection of animals at the time of slaughter showed a total of 32 infected animals: 14 cows and 18 calves, all from the collective herd.
- Foot lesions were also observed. An official Order was issued by the Regional Service of Iambol for enforcement of the sanitary and control measures.

During discussion with the farmers in the village the mission was informed that the cattle in the village were composed of three collective herds for grazing which corresponded to three different epidemiological units and no disease had been observed in the other two collective herds.

MEASURES TAKEN

Three zones (A,B,C) were established around the village corresponding to three surveillance zones. A general headquarters located in Elhovo in zone C, under the authority of Dr **Kozarov**, Director of Animal Health, coordinates control measures in the three zones.

CONTROL ZONES

LIVESTOCK IN CONTROL ZONES A, B AND C

SPECIES	ZONE A	ZONE B	ZONE C	TOTAL
CATTLE	464	323	1,706	2,487
BUFFALO	8	47	92	147
SHEEP	6,926	7,913	26,523	41,362
GOATS	2,866	3,596	5,360	11,822
TOTAL	11,205	13,862	43,693	68,760

Zone A

Includes the 8 villages located within a 15 km radius around the outbreak which are crossed by roads going to the infected villages. Total susceptible animals in the zone 11,205.

Zone B

The other village of the commune of Buliarovo corresponding to the 20 km zone around the outbreak. Total susceptible animals 13,862.

Zone C

Other communes of the Iambol District Total susceptible animals: 43,693.

MEASURES IN ZONES A AND B

-the villages have been closed to trade and transit until further notice. Disinfection facilities at the entry to the premises or farms, police control on the roads, census of susceptible animals and confinement to the stables.

-interdiction of movement of animals including to the abattoir

-closure of slaughter house, milk factory, markets and other public places where animals are gathered

-milk delivery to Iambol factory for heat treatment and transformation into yogurt is under veterinary control

-daily inspection of susceptible animals

-prohibition of wood trade from zone A to places outside of the District of Iambol

ADDITIONAL MEASURES IN THE INFECTED VILLAGE

-destruction and burial of sick and contact animals

-establishment of evaluation commissions

-prohibition of entry and exit of people with the exception of school children after disinfection of the school bus

-these measures are controlled by the army, 40 soldiers for the village, five check points at the three entries to the village, double checkpoints at 300 metres distance on two roads.

-disinfection facilities at each checkpoint, disinfection facilities at the entry to each farm

-slaughter of susceptible animals at Elhovo abattoir (Zone C) with destruction of offal, heads, feet and intestines and processing of meat in heat treated (72oC) products.

-prohibition of exit and transit of animal and animal products including vegetables and poultry until further notice, probably 21 days.

-destruction of milk.

MEASURES TAKEN IN ZONE C

-closure of markets and prohibition of animal movements inside the district

-prohibition of sale of animals, animal products outside the district

-prohibition of pasture for 500 meters along the roads (difficult to be applied)

-clinical examination of animals every two to three days

MAIN OBSERVATIONS AND CONSTRAINTS IDENTIFIED

A list of recommendations concerning the under-mentioned observations and constraints has been submitted to the Ministry of Agriculture of Bulgaria.

Efficacy of the measures : the control measures were enforced very quickly following the occurrence of the disease and the control measures around the village by the army appeared to be very effective.

Financial aspects : a credit of 40 million Leva (US$160,000) has been made available for control of the disease. This includes: disinfection, cost for the army, diagnostic and compensation for animals - estimated at 4 million Leva for animals already destroyed and 12 million for those to be slaughtered. This amount is probably insufficient to cover all the costs involved.

Equipment available : the protective clothing is unsuitable and insufficient in quantity. Utilisation of disposable protective clothing and rubber boots should be recommended. The mobile disinfection equipment is old.

Slaughter and treatment of meat : the carcasses of bovines were frozen before complete maturity and material destined for meat processing is not equipped with a temperature registration system and seems, among other things, poorly adapted for complete heat treatment. The attention of the Bulgarian authorities was brought to the necessity to register the temperature all along the treatment process, even manually through the utilisation of probes placed at the centre of the product. The same applies to milk treatment.

Control of animal movements : due to lack of funds, the animals have not been identified. Numerous incursions of animals were noticed along the Bulgarian-Turkish and Bulgarian-Greek borders. Control is, in fact, very difficult. In addition to the incursion of animals, tourism around Malko Sharkovo lake dam is also a reason for concern. Control of animal movements seems to be effective on roads as the mission saw a consignment of fattening pigs illegally transported being seized and slaughtered at the time of the visit to the abattoir of Elhovo.

National contingency plans for FMD : no reference was made to the contingency plan during our mission. This plan should be made available in each veterinary unit and a training and simulation exercise should be organized.

Serological testing : 13,971 serum samples have been collected in the district along the borders and most of them tested for FMD antibodies in 1996. The result provided to the mission showed all samples to be negative. However, several weak points along the chain of analysis from the field to the laboratory have been identified. Regarding serosurveillance, clear objectives and means should be identified. The epidemiological unit, the level of confidence, the expected prevalence, species to be sampled should be clearly determined before starting the survey.

ORIGIN OF THE OUTBREAK

At the time of the mission, the origin of the outbreak was unknown. A number of hypotheses were under consideration and further epidemiological investigations were to be carried out.

Possibilities included the following:

- Legal or illegal movement of clinically normal but infected animals
- Contaminated vehicles
- Movement of people
- Windborne spread from Turkey
- Contaminated animal feed

CONCLUSIONS

The rapidity of the action taken and the control measures adopted put the outbreak under control and even seems to have been able to prevent spread of the disease. A period of observation is nevertheless necessary to confirm that there has been no spread.

The Bulgarian authorities have requested support from EUFMD and EC for the prevention and control of the disease.

Appendix 2

REPORT ON THE ACTIVITIES OF THE RESEARCH GROUP DURING 1996

The major event involving the Research Group during 1996 was an Open Session held jointly with the FMD Sub-group of the Scientific Veterinary Committee of the Commission of the European Communities at the Convention Centre of Kibbutz Ma'ale Hachamisha, Israel from 2-6 September 1996. The meeting was highly successful both in terms of the quality and quantity of the scientific presentations and exchanges and also in regard to the number of participants and the range of countries represented. The meeting was especially valuable in bringing together participants from the Middle East and providing a forum for discussions about the control of FMD in that region.

Review of current situation in Europe and Israel

The scientific proceedings were begun by Dr Y Leforban, Secretary, EUFMD who presented a review of the FMD situation in Europe during 1996. He reported that two epidemics had occurred: one of type A affecting 3 countries *viz.* Albania, FYRO Macedonia and FR of Yugoslavia; and one of type O affecting Turkish Thrace and Greece. Additional information on the situation in Turkey and Greece was provided by Dr I Gurhan and Dr H Hondrokouki, respectively. Dr H Yadin provided an account of FMD in Israel during recent years.

Following discussions the Group recommended that:

1. In view of the low number of virus isolates from samples submitted to the WRL from the recent Balkan FMD epidemic, all state veterinary authorities should be encouraged to ensure that samples are collected correctly and submitted to diagnostic laboratories.

2. Countries affected by FMD outbreaks should be encouraged to submit more samples to the WRL to assist future strain characterisation and epidemiological studies. Strains of FMD virus from Asiatic Turkey are especially requested.

3. There is a need to develop a harmonised Balkan policy for livestock and livestock product importation, routine surveillance in the area and contingency plans to deal with future FMD outbreaks. The previous recommendation of the EUFMD for meat imports should be strictly applied. Only deboned meat originating from FMD-free countries/areas should be authorised in accordance with Chapter 2.1.1 Foot and Mouth disease in the OIE International Animal Health Code.

4. Monovalent vaccine should be used for ring vaccination following an outbreak in a country or zone normally free of FMD.

5. If a sero-surveillance programme is decided it should be based on statistically sound sampling. It should be carried out only in an approved national laboratory.

6. National veterinary services should prepare in advance cost-benefit analyses of the possible scenarios for the control of the disease (with and without vaccination) in the different parts of their territory.

7. Laboratories in the Balkan region should reinforce their security measures because of the possibility of receiving samples from infected animals.

8. The FMD vaccine used in Turkey should be officially approved by the national veterinary service. The establishment of an independent quality control laboratory for FMD vaccines is essential.

9. Training should be provided for veterinary staff from the Balkan countries in disease recognition, collection of samples, and control measures. National laboratories should acquire the capacity for serological testing in order to respond to future needs for sero-surveillance.

Persistence of FMD virus in ruminants including game animals

A series of papers was presented on the FMD carrier state in milking sheep and in experimentally infected cattle and of transmission from cattle to llamas. Results were also given of studies in Israel on the production of airborne FMD virus from wild pigs and of the prevalence of antibody in wild pigs and gazelle.

The results with llamas suggested that they were not very susceptible to FMD by contact infection and probably play a minor role, if any, in the epidemiology of FMD.

It was not clear from the wildlife studies in Israel whether infection had spread from the wildlife to domesticated species or *vice versa.*

The Group agreed that further work should be done on the carrier state and should be directed towards identification of the cellular sites of persistence and the development of methods which may prevent the establishment of the carrier state.

Improved and new techniques for the diagnosis of FMD

Following an overview of recent developments in FMD diagnosis given by Dr R Ahl, a series of papers was presented.

The following recommendations arose from the discussions.

1. To confirm the presence of FMD virus the use of several detection systems is recommended.

2. Further research on modern techniques of FMD diagnosis is recommended for comparison with conventional methods.

3. The added value of PCR compared to conventional methods of FMD diagnosis in the incubation period and in FMD carriers should be evaluated.

4. Further investigations are required for the optimisation of PCR and its applications.

Potency and stability of FMD vaccines prepared from stored antigens

Dr S Barteling opened this item with a presentation which reviewed the establishment of the Community Vaccine Bank and its current portfolio of antigens. He provided data showing that the majority of the vaccines produced from stored antigens were highly potent. He made recommendations about the supply of batches of antigens to the bank by commercial producers so as to simplify testing procedures.

In the discussions the broad spectrum response elicited by highly potent vaccines - such as those in banks was noted and the **recommendation** was made that in areas with endemic FMD vaccine manufacturers should be encouraged to supply vaccine of similar potency i.e. $\geq$6PD50/dose.

Differentiation of antibodies induced by vaccination and infection

An impressive number of papers was presented on this important topic. The majority of the speakers

were from European laboratories but contributions were also given by speakers from South America.

The session illustrated that a number of tests have been developed in which a positive result can be taken as conclusive evidence of previous infection with FMD virus and these tests may have an immediate value for the identification of infected herds/flocks e.g. in the Balkan region and elsewhere. However, because the duration of the antibody response to non-structural (NS) proteins following infection has not been as well established as for structural proteins, a failure to detect antibody to NS proteins may not necessarily indicate that exposure to FMD virus has not taken place.

Standardisation of FMD diagnosis

Dr D J K Mackay opened this item with a report of the results of Phase XIV of the FAO International Standardisation Programme. The aims of Phase XIV were to compare the sensitivity and specificity of different laboratory tests, to establish a panel of FMD reference sera and to look at the variation occurring between the results from different laboratories.
The exercise showed that there was considerable variation in the sensitivity and specificity of individual laboratory assays. The use of the standardised LPB-ELISA reduced the variation between laboratories in the interpretation of positive sera as positive but also increased the number of negative sera incorrectly classified as positive.

It was concluded that the use of a standardised test alone is not sufficient to harmonise testing between laboratories. There was evidence of systematic rather than random error in the performance of the LPB-ELISA.

A series of **recommendations** arose from the discussions which included the following.

1. The WRL should produce and distribute a panel of reference sera for antibody to FMD virus types O_1, A and C analogous to those distributed during Phase XIV. Participating laboratories will be requested to examine the sera using both their screening ELISA and the virus neutralisation test. The intention will be to define a range of definitive reference sera.

2. For validation of tests used in different laboratories, every year a standardisation exercise should take place comparable to the one used in Phase XIV.

Emergency vaccination against FMD: present and future

Dr M Amadori gave a review of emergency vaccination and of the prospects for further developments. He was followed by speakers who presented results illustrating improved immune responses with different oil-adjuvanted formulations.

After discussion the following **recommendations** were agreed.

1. The present situation of the FMD vaccine banks in Europe be revised and a clearer allocation be defined of liability and responsibility. In particular, the operational procedures of the European Vaccine Banks (EVB's) should adequately match any emergency situation. The legal and logistic problems related to the EVB's should be urgently resolved.

2. In view of the versatility of oil emulsion FMD vaccines in terms of their efficacy in all species, these types of formulation be given primary consideration for use as an 'emergency' vaccine in outbreaks.

3. In choosing emergency vaccine due respect should be paid to the potency of the vaccine since high potency will compensate for non-homology between vaccine and field strains.

Computer assisted management of FMD epidemics

Two presentations were given on this item, the first by Dr D K J Mackay who explained the general features of the EpiMAN(EU) decision support and epidemic management system, and the second by Dr A Dekker who presented results on the effect of calculating airborne FMD virus plumes using different weather stations and two different levels of virus output. Comparative trials between two models showed similar results for short distance (< 10km) transmission. The model RIMPUFF in EpiMAN(EU) has the advantage that it can predict the probability of spread over long distance.

The following **recommendations** were agreed.

1. Veterinary authorities are encouraged to investigate the feasibility of adapting EpiMAN for operational FMD control within their country.

2. More information is required on the 'hit rate' of farms under virus plumes becoming infected. This requires more precise biological information relating to minimal infective doses and virus survival. In addition, more extensive retrospective analysis of previous outbreaks is required to more accurately predict 'hit rates' during epidemics.

3. Further research into the operational use of computerised decision support systems is encouraged.

Vaccination of neonates against FMD

Papers were presented in this session by Drs Terpstra, Kitching and Smitsaart on investigations which examined the responses of young animals of different species and age either with maternal antibodies or free from maternal antibodies using oil or aluminium hydroxide/saponin adjuvanted FMD vaccines.

The **recommendations** arising from the discussion were:

1. Further work is required to confirm, under different field conditions, the advantage of using oil-adjuvanted vaccines in both cattle and sheep.

2. The intradermal route of application of FMD vaccine should be studied in comparison with subcutaneous and intramuscular routes.

3. The relative contribution of antigen content, vaccine formulation and adjuvant to vaccine potency in overcoming interference from maternally derived antibody should be further investigated.

Contingency plans for application of emergency vaccine

A joint paper by Dr A Donaldson and Dr P Have was presented under this heading. It focused on two aspects of emergency vaccination: (i) the criteria to be considered in making a decision of whether or not to apply emergency (ring) vaccination; and (ii) a check list of the logistic requirements in implementing an emergency vaccination campaign.

The presenters stated that in reaching a decision of whether or not to vaccinate there are many parameters to be considered and that 'rules of thumb' cannot be provided in advance to meet all situations - each will have its own unique features which will require separate assessment. They emphasised that if a decision to vaccinate is made it must be done quickly and implemented soon afterwards. Computer-based decision support systems can provide valuable and objective assistance.

The **recommendations** which were formulated from the discussions were:

1. An efficient mechanism needs to be developed to guarantee the early supply of emergency vaccine to the field in an outbreak situation.

2. The Group recommended that vaccine banks should have local bottling capability, and that in an emergency the formulated vaccine should be sent directly from the bottling facility to the country making the request.

3. Formulation and bottling facilities (as mentioned under Item 2) should have available sufficient materials for the preparation of a complete antigen/vaccine stock (e.g. for EVB's, 2.5×10^6 doses).

4. The Group agreed that the Chairman should write to Mr K C Meldrum, Chairman, Executive Committee, EUFMD, recommending that the EUFMD should propose to OIE that the International Animal Health Code be modified to incorporate rules on regionalisation.

5. Depending on the commercial supplier, any future antigen reserves should include a stock of vaccine formulated for immediate use.

6. Every time the vaccine is produced from antigen stored in the EVB, a sample should be sent to the control laboratory (CCI), in order to confirm that the vaccine issued conforms to the initial standards of acceptance.

Quality assurance in National FMD Laboratories with reference to EN 45000 standards

Dr K DeClercq explained the requirements for achieving standards EN 45001 and ISO 9000 and provided a description of the 'OIE Guidelines for Laboratory Quality Evaluation' and 'Draft OIE Guidelines for Laboratory Proficiency Testing'.

The Group discussed the problems of implementing these guidelines and drew up the following **recommendations.**

1. FMD laboratories carrying out diagnostic tests to qualify animals and animal products for international movement should participate in a Quality Assurance programme. This programme should include laboratory quality evaluation and proficiency testing, based on the OIE Guidelines for Laboratory Quality Evaluation and the OIE Guidelines for Laboratory Proficiency Testing.

2. FMD laboratories are encouraged to adapt their tests until they pass an evaluation for proficiency.

3. Lack of participation in or failure to pass proficiency testing by a laboratory should temporarily prevent animals or animal products from that country from entering international trade.

4. Clarification should be sought from international organisations about responsibility for establishing, running and financing an internationally recognised proficiency testing scheme for FMD diagnostic tests. Clarification is also required about official recognition and accreditation of FMD laboratories in recognised schemes.

5. The Chairman should present recommendations to the meeting which will be convened at OECD, Paris on 13 September 1996.

Closed session - *Training*

The Secretary informed the Group that the Commission had received requests from FYRO Macedonia, Croatia, Albania and the FR of Yugoslavia for the training of personnel. A lack of local diagnostic capability was evident during the recent outbreaks of FMD in the Balkans. The Group agreed that comprehensive training should be offered and suggested that the Secretary should contact the International Atomic Energy Agency (IAEA), Vienna - a joint division of FAO, and propose to them that they consider as a high priority the initiation of a programme of FMD diagnosis technology transfer to the Balkan states. IAEA should be informed that support is also required for the provision of diagnostic kits and equipment. Several members of the Group expressed a willingness to offer training in their laboratories for technicians from the Balkan area.

Serological surveillance in the Balkan area

The Secretary raised the issue of whether there was a need for a serological survey in the Balkans. The Group agreed that it could be useful but before it is initiated the objectives should be clearly defined. Two aims were identified: (i) to identify whether there is active FMD infection within the declared surveillance zone; and (ii) to test animals which have been vaccinated to evaluate the potency of the vaccine administered during the emergency.

Future use of FMD vaccine in the Balkans

The issue of whether the strain of vaccine to be used in the next round of vaccination in the Balkans should be A_{22} as before or changed to the homologous type A strain was discussed. It was agreed that if an homologous vaccine of equal potency to that supplied by the Community Vaccine Bank (CVB) was available then it should be used - otherwise the use of A_{22} vaccine from the CVB should be continued. The Group agreed that there was no need to add any new strains to the CVB as a result of the Balkans episode.

OIE Standards Commission Manual

The Chairman informed the Group that the OIE Standards Commission had replied in the negative to the Research Group's proposal that the wording in the OIE Manual should be altered from "prescribed tests" to "established tests". The Group accepted this decision.

The Chairman agreed to submit to the OIE Standards Commission the recommendation of the Vladimir meeting that "tests which have been demonstrated to be of equivalent or greater sensitivity to the LPBE and VNT should be considered as prescribed tests".

Membership

The Group was informed and noted with regret, that due to their retirement the membership of Dr R Ahl and Dr C Terpstra would cease at the time of the next General Session. (In a subsequent session of the meeting the Chairman paid tribute to the contributions which these internationally acclaimed scientists had made to the Group and the EUFMD during their many years of dedicated service).

Venue for next meeting

Dr M Danes kindly invited the Group to hold its next meeting - a business (closed) session, in Brasov, Romania in September 1997.

Appendix 3

REPORT OF OIE/FAO WRL FOR FMD
January - October 1996

Supply of Diagnostic Reagents

Diagnostic reagents and reference viruses have been supplied to:

The Netherlands	Slovakia	Taiwan
India	Greece	Canada
Brazil	Kuwait	Russia
South Africa	UAE	Sri Lanka
Belgium	Israel	Indonesia
Germany	Sweden	Iran
Romania	Czech Republic	Italy
Denmark	Turkey	Japan
Macedonia	Bulgaria	Morocco
Botswana	Switzerland	Slovenia
Estonia	Philippines	

Collaborations

a. Phase XIV of the FAO Collaborative Study with 32 other FMD laboratories to standardise diagnostic tests was completed.

b. In addition to (a), a Collaborative Study under the direction of the International Atomic Energy Agency to introduce ELISA for FMD was continued in S.E. Asia, involving Myanmar, Vietnam, Laos, Cambodia, Hong Kong, Malaysia, Philippines, Bangladesh and Sri Lanka.

Collaborations:

1. Saudi Arabia on the response of dairy cattle to FMD vaccination using oil adjuvanted vaccines.

2. Argentina on the FMD virus persistence in carrier cattle.

3. The Netherlands, Italy and Germany on the development of immunoassays to detect antibody to non-structural proteins of FMD.

4. Denmark, Holland and Italy on the computer modelling of FMD outbreaks.

Training

Visits to the WRL for training or technical discussion were made by scientists from India, Turkey, Thailand, South Africa, Argentina, Philippines, The Netherlands, Italy, Tunisia, Mali, Japan, Chile, USA and Saudi Arabia.

Visits by WRL staff to other Laboratories

Technical consultation and advisory visits were made to Saudi Arabia, Myanmar, Vietnam, Morocco, Kenya, Greece, Botswana, Macedonia, Albania, Bulgaria, and Turkey.

OIE/FAO World Reference Laboratory for Foot and Mouth Disease*
CUMULATIVE REPORT FOR JANUARY - OCTOBER, 1996

COUNTRY	No. of samples	FMD virus serotypes							SVD (a)	NVD (b)
		O	A	C	SAT1	SAT2	SAT3	ASIA 1		
ALBANIA	4	-	4	-	-	-	-	-	-	-
AFGHANISTAN	13	5	-	-	-	-	-	-	-	8
BAHRAIN	23	7	-	-	-	-	-	-	-	16
BURKINA FASO	31	-	-	-	-	-	-	-	-	31
COTE D'IVOIRE	23	-	2	-	-	-	-	-	-	21
ETHIOPIA	8	6	-	-	-	-	-	-	-	2
ERITREA	1	1	-	-	-	-	-	-	-	-
F.R.YUGOSLAVIA	6	-	-	-	-	-	-	-	-	6
GHANA	4	-	3	-	-	-	-	-	-	1
GREECE	38	19	-	-	-	-	-	-	-	19
HONG KONG	24	22	-	-	-	-	-	-	-	2
INDIA	2	-	-	-	-	-	-	-	-	2
ISRAEL	3	2	-	-	-	-	-	-	-	1
JORDAN	4	3	-	-	-	-	-	-	-	1
KENYA (c)	24	4	3	1	-	17	-	-	-	-
KUWAIT	2	2	-	-	-	-	-	-	-	-
MACEDONIA	15	-	11	-	-	-	-	-	-	4
MALAYSIA	30	10	3	-	-	-	-	5	-	12
MAURITANIA	9	-	-	-	-	-	-	-	-	9
MYANMAR	12	6	-	-	-	-	-	4	-	2
NEPAL	100	30	4	1	-	-	-	-	-	65
PHILIPPINES	7	6	-	-	-	-	-	-	-	1
PORTUGAL	13	-	-	-	-	-	-	-	-	13
RWANDA	13	-	-	-	-	1	-	-	-	12
TANZANIA	5	2	-	-	3	-	-	-	-	-
TUNISIA	15	-	-	-	-	-	-	-	-	15
TURKEY	12	11	1	-	-	-	-	-	-	-
UGANDA	36	6	-	-	-	2	-	-	-	28
U.ARAB EMIRATES	20	-	-	-	-	-	-	-	-	20
TOTAL	497	142	31	2	3	20	-	9	-	291

* Institute for Animal Health, Pirbright Laboratory, Woking, Surrey GU24 ONF, U.K.

(a) Swine vesicular disease

(b) No virus detected

(c) One sample from Kenya contained both FMDV types C and SAT2.

Appendix 4

AVAILABILITY OF VACCINE FOR EMERGENCY VACCINATION IN EUROPE EMERGENCY VACCINATION PRESENT AND FUTURE

Emergency vaccination and prospects for development in this area was the subject of a comprehensive review at the Session of the Research Group held in Israel from 2 to 6 September 1996.

The following statements and recommendations were made:

quote

- *Availability - problems arise as to how FMD vaccines and/or antigens should be stored and kept available for emergency; in particular, proper liaison may be lacking between antigen storage facilities, vaccine formulation plants and distribution centres; problems of liability should be also solved if vaccine is not formulated by the manufacturer. A supplementary store of potent, ready-to-use vaccines could probably improve the present situation in Europe.*

- *Source of virus antigen; this should be certified as to the origin, inactivation procedure, concentration, residual toxicity; in the case of concentrated, inactivated FMDV antigens, stored in liquid nitrogen tanks, the problems of vaccine shelf life after formulation should be carefully evaluated; alternative procedures for production and storage of FMDV concentrated antigens have been also reported. These should be further investigated in the near future.*

- *FMD virus strain; rapid diagnostic procedures on FMDV isolates should provide information as to the degree of relatedness to reference vaccine strains; there is evidence, however, that potency of vaccines (rather than relatedness) can often play a major role in the efficacy of emergency vaccination.*

- *The dose of antigen; this should enable the great majority of vaccinated animals to mount an early, effective immune response; the antigen content should be regulated accordingly. In this respect a level of 6 PD50 should preferably be obtained for emergency vaccines.*

- *Adjuvant; some choices are possible, which are made with regard to the different animal species to be vaccinated; due to practical features, the use of a "universal" vaccine is badly needed; in this respect a DOE formulation has been suggested and successfully tested.*

unquote

Utilisation of vaccination in the Balkan countries , Albania, FRYO Macedonia, FRO Yugoslavia:

The Balkan countries had no vaccine stock available locally for control of the disease. In addition, limited financial resources made the purchase of vaccine difficult in certain countries.

Under this situation vaccine was made available by EUFMD for urgent vaccination and then EC accepted to provide financial support with vaccine reformulated from the EU bank (see Tables 1 and 2).

It must be underlined that this was the first time that a large vaccination campaign was organised at regional level since preventive vaccination was discontinued in Thrace in 1989. It is also the first time that the EU antigen bank has been utilised.

TABLE 1 - TABLE OF THE EVENTS IN THE BALKANS

EVENT	ALBANIA	FYRO MACEDONIA	FR YUGOSLAVIA
First Suspicion	02 May	25 June	7 July
Notification	25 May	29 June	9 July
Date of the EC Decision	7 June - 19 June	8 July - 18 July	8 August
Date of arrival of first batch of vaccine in the country	12 June	13 July (the 20 000 doses provided by OIE arrived on 9 July)	31 July (the 14 000 doses provided by OIE arrived on 20 July)
Date of first vaccination	20 June	10 July	-
Delay (days)	26	11	-
Last clinical case	22 June	13 July	2 August
Date of completion of the first round	12 July	27 July	-
Date of completion of the second round	21 August	20 August	-

TABLE 2 - QUANTITIES OF A 22 VACCINE (CATTLE DOSES) PROVIDED TO THE BALKAN COUNTRIES

	ALBANIA	FYRO MACEDONIA	FRO YUGOSLAVIA	**TOTAL**
OIE		20 000	14 000	34 000
EUFMD (TF 904200)	110 000 (DOE)	-	100 000	210 000
EU BANK (TF 911100)	260 000	220 000	-	480 000**
TOTAL	370 000	240 000	114 000*	724 000

* not used, still available in Belgrade;

** in addition to this quantity, 120 000 doses have been reformulated as strategic stock and are still available with the manufacturer.

A total of 370,000 doses have been supplied to Albania, 110,000 of oil vaccine from private manufacturers and 260,000 doses of aluminium hydroxide vaccine reformulated from the EU bank. The EUFMD Commission provided 100,000 doses to Yugoslavia to start vaccination in Kosovo but considering that the disease was brought under control by 2 August, this vaccine was not used and it is still available in Belgrade. The Yugoslavian authorities agreed to return this vaccine or to make it available to other countries in case of need.

The preliminary conclusions of this regional vaccination campaign are:

- vaccination remains a major tool for the control of FMD especially in the situation where sanitary measures are applied after delays or are not fully implemented.

- the vaccination campaign proved to be effective in stopping the spread of the disease in the region.

- the delays between the decision to vaccinate and actual implementation of vaccination in the field were too long (15 to 30 days). The responsibility for these delays is to be found at different levels:

. EUFMD: the provision of vaccine through private manufacturers is carried out through tenders which takes a minimum of one week (between the despatch of tenders to the firm order)

. EC: all action and financial support from EC needed a country decision, which was approved by the SVC. This applies to Trust Fund 911100 MTF/INT/003/EEC.

. manufacturers: the delay for delivery of the vaccine either reformulated from the EU antigen bank is minimum 4 days but the cost is then doubled due to the fact that the manufacturer must stop other activities. The usual delay for delivery has been 2 to 3 weeks.

. countries: when vaccine arrived in the country of destination, the start of the vaccination was delayed due the unpreparedness of the veterinary services or unavailability of certain equipment for vaccination.

Stocks of vaccine in neighbouring countries

Bulgaria

At the Tripartite meeting held in Ankara on 11 October, Bulgaria informed the meeting that they had increased their reserve of strategic vaccine stock at the Vladimir Institute, Russia, from 50,000 to 140,000 monovalent doses of A22 and O1 types. This stock includes 50,000 doses of aluminium hydroxide vaccine and 20,000 of oil vaccine for each serotype.

Croatia

A stock of 20,000 doses of O1 and 20,000 doses of A22 purchased by the Government of Croatia from a private manufacturer is held as a strategic stock in Zagreb .

It is proposed that a new questionnaire be sent to member countries at the beginning of 1997, before the Thirty-second Session to assess the national stocks which may have been modified due to the new FMD situation in Europe.

Appendix 5

MTF/INT/011/MUL – TF number 904200

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

Financial Report as at 30 September 1996

Statement 1

	US$	US$
Balance as at 1 January 1996		135,733
Interest received (average rate 7.0%)	3,090	
Contribution from member countries (As per statement 2)	258,062	261,152
Expenditure		
Commission Secretary	92,053	
Admin. Support Personnel	58,430	
Duty Travel	18,009	
Expendable Equipment	4,987	
Non–Expendable Equipment	4,296	
Total Expenditure		(177,775)
Balance as at 30 September 1996		**219,110**

STATEMENT 2

TRUST FUND No. 9042.00 – MTF/INT/011/MUL – Inter–Regional – European Commission for the Control of Foot–and–Mouth Disease

Status of Contributions as at 30 September 1996
(expressed in US$)

Member Governments	Outstanding 31/12/1995	Contribution due for 1996	Received up to 30/09/1996	Outstanding 30/09/1996
ALBANIA	1,307.85	1,300.01	1,285.00	1,322.86
AUSTRIA	0.00	7,800.71	7,800.71	0.00
BELGIUM	0.00	13,000.40		13,000.40
BULGARIA	11,364.81	3,900.09		15,264.90
CYPRUS	0.00	1,300.01	1,300.01	0.00
CROATIA	0.00	1,300.01		1,300.01
CZECH REPUBLIC	(7,800.00)	7,800.71		0.71
DENMARK	0.00	13,000.40	13,000.40	0.00
FINLAND	0.00	7,800.71	7,800.71	0.00
FRANCE	0.83 /1	26,000.83	26,000.83	0.00
GERMANY	0.00	26,000.83	26,000.83	0.00
GREECE	36.24	3,900.09	3,900.09	36.24
HUNGARY	0.00	7,800.71	7,800.71	0.00
ICELAND	0.00	1,300.01	1,300.00	0.01
IRELAND	0.00	3,900.09	3,900.09	0.00
ISRAEL	0.00	3,900.09	3,900.09	0.00
ITALY	0.00	26,000.83	26,000.83	0.00
LITHUANIA	0.00	3,900.09	3,900.09	0.00
LUXEMBOURG	0.00	1,300.01	1,300.01	0.00
MALTA	0.00	1,300.01	1,300.00	0.01
NETHERLANDS	13,000.40	13,000.40	26,000.80	0.00
NORWAY	17.50	3,900.09	3,917.59	0.00
POLAND	0.00	13,000.40	13,000.40	0.00
PORTUGAL	0.00	3,900.09	3,900.09	0.00
ROMANIA	1.42 /1	7,800.71		7,800.71
SLOVENIA	650.00	1,300.01	1,950.01	0.00
SPAIN	0.00	13,000.40	13,000.40	0.00
SWEDEN	0.00	13,000.40	13,000.40	0.00
SWITZERLAND	0.00	13,000.40	13,000.40	0.00
TURKEY	0.00	7,800.71	7,800.71	0.00
UNITED KINGDOM	0.00	26,000.83	26,000.83	0.00
FED. REP. OF YUGOSLAVIA	36,659.88	7,800.71		44,460.59
TOTALS	55,238.93	286,011.79	258,062.03	83,186.44

1/ Amounts under $10 have been surrendered.

STATEMENT 3

Summary of Contributions Received in Arrears in 1996

Received in arrears for earlier Years	US$
ALBANIA	1,285.00
NETHERLANDS	13,000.40
NORWAY	17.50
SLOVENIA	650.00
	14,952.90

STATEMENT 4

MTF/INT/004/MUL – TF number 909700

FOOT AND MOUTH DESEASE – EMERGENCY AID PROGRAMME

Financial Report as at 30 September 1996

	US$	US$
Balance as at 1 January 1996		95,706
Interest received (average rate 7,0%)		2,693
Expenditure		
Expendable Equipment	41,878	
Total Expenditure		(41,878)
Total at 30 September 1996		56,521

STATEMENT 5

MTF/INT/003/EEC – TF number 911100

FOOT AND MOUTH DESEASE

Financial Report as at 30 September 1996

	US$	US$
Balance as at 1 January 1996		1,251,036
Interest received (average rate 7.0%)		34,917
Expenditure		
Consultancy (International)	1,067	
Duty Travel	14,042	
Expendable Equipment	160,552	
Support Costs 6% (on all items except vaccine)	907	
Total Expenditure		(176,568)
Total at 30 September 1996		1,109,385

TF 9042: Expenditure 1995, Provisional Expenditure 1996, Proposed Budget 1997

		Expenditure 1995	Expenditure 30 September 96	Proposed Budget for 1997
1101	Secretary	129282	88488	126243
	Educ Grant			
	home leave		2314	
1300	Adm Assis	85967	55833	76677
	home leave		1251	
	overtime		2597	4000
	32d session			15000
Sub total Personal Services		**215249**	**150483**	**221920**
2000	Duty travel Secretariat	29422	18009	22500
3000	Contracts	46400		30000
4000	GOE	3112		
	Expendable Equipment		4987	
6000	Non Expendable Equipment		4296	600
	Hospitality			1500
Sub Total		**78934**	**27292**	54600
TOTAL		**294183**	**177775**	**276520**

SPECIAL ACCOUNT

1300	G 2 Temp Sec. Assistance by 6 months	20136
2000	Travel Res Group/coll between Institute	30000
	Rapporteur for the session	
TOTAL		**326656**

TF 911100: Expenditure 1995, Provisional Expenditure 1996 and proposed Budget 1997

		Expenditure1995	Expenditure 30 September 96	Proposed Budget 1997
1151	Consultant		1067	50000
	Training			10000
2000	Duty travel	26796	14042	20000
4000	GOE	7		2500
5000	Expendable Equipment		160552	100000
9100	Support cost 6 %	1608	907	4950
TOTAL		**28411**	**176568**	**187450**

TF 909700: Expenditure 1995, Provisional Expenditure 1996 and proposed Budget 1997

		Expenditure1995	Expenditure 30 September 96	Proposed Budget 1997
2000	Duty travel			5000
4000	GOE	2		
5000	Expendable Equipment	5137	41878	40000
	Other Expendable Equip	2563		5000
9100	Support cost 6 %			300
TOTAL		**7702**	**41878**	**50300**