

directing council



PAN AMERICAN
HEALTH
ORGANIZATION

XXV Meeting

regional committee

WORLD
HEALTH
ORGANIZATION



XXIX Meeting

Washington, D.C.
September-October 1977

INDEXED

Provisional Agenda Item 19

CD25/19 (Eng.)

11 August 1977

ORIGINAL: SPANISH

REPORT ON THE X INTER-AMERICAN MEETING, AT THE MINISTERIAL LEVEL, ON FOOT-
AND-MOUTH DISEASE AND ZONOSSES CONTROL

The X Inter-American Meeting, at the Ministerial Level, on Foot-and-Mouth Disease and Zoonoses Control was held at the Headquarters of the Pan American Health Organization, Washington, D.C., from 14 to 17 March 1977, having been convened by the Director of the Pan American Sanitary Bureau pursuant to Resolution XIX approved by the Directing Council of PAHO at its XVII Meeting.

The meeting was attended by the Ministers of Agriculture or representatives of 28 Member Governments, staff members of the Pan American Sanitary Bureau, and observers from the United Kingdom and the following international organizations: International Bank for Reconstruction and Development, Inter-American Development Bank, International Road Federation, International Group for Agricultural Development in Latin America, Inter-American Institute of Agricultural Sciences (OAS), International Office of Epizootics, Regional International Organization for Plant and Animal Health, Organization of American States, Food and Agriculture Organization of the United Nations, and the United Nations Development Program. Also in attendance were observers from the National Academy of Sciences (USA), the Plum Island Animal Disease Center (USA), and the American Society of Tropical Medicine and Hygiene.

The draft program and budgets for 1978 of the Pan American Foot-and-Mouth-Disease and Zoonoses Centers were submitted to the meeting and, after being thoroughly discussed, received the firm support of the delegates. The draft budgets are part of the overall budget for animal health and veterinary public health activities of the Division of Disease Control of the Pan American Health Organization.

In addition to their training and research activities, the Centers provide the countries with technical cooperation in the fields of foot-and-mouth disease and zoonoses through the animal health and veterinary public health projects of the Division of Disease Control (project series 3100, 3200 and 3300).

Resolutions I and II of RICAZ X, which reflect the opinion of the Ministers of Agriculture of the Hemisphere, recommend to the XXV Meeting of the Directing Council of the Pan American Health Organization that it approve the draft program and budgets.

In accordance with the agreement reached by the Ministers of Agriculture at RICAZ VIII, the reports of the Member Governments were presented in the order of the countries making up each one of the PANO areas. These presentations, which were by way of being appraisals, dealt with the present status of the application and implementation of the animal health and veterinary public health recommendations and goals established in the Ten-Year Health Plan for the Americas, which was approved by the Governing Bodies of the Pan American Health Organization in Santiago, Chile, in October 1972.

The principal technical topics dealt with at RICAZ X were as follows: (1) the Pan American Highway and Foot-and-Mouth Disease: this panel discussed the importance of the Pan American Highway for hemispheric development, the present state and future prospects of the construction of the Highway, foot-and-mouth disease in Colombia and its relation to the Highway, programs for the prevention of foot-and-mouth disease in Central America and Panama, and the control and prevention of foot-and-mouth disease at the hemispheric level; (2) pesticides and health: this panel dealt with pesticide management problems of public health concern, the treatment of cattle disease with insecticides and their residual action in foodstuffs of animal origin, the importance of regulations for the use of pesticides and the contamination of foodstuffs, and problems involved in the establishment of laboratories for the control and detection of pesticides; and (3) the epidemiology, diagnosis and control of infectious bovine rhinotracheitis.

Other topics discussed were epidemiological surveillance of rabies, equine encephalitis, vesicular diseases in the Americas, and the research program of the Pan American Zoonoses Center, which was presented by the Scientific Advisory Committee of that Center.

In addition to the two resolutions relating to the draft program and budgets of the Pan American Foot-and-Mouth Disease and Zoonoses Centers, RICAZ X approved 16 other resolutions, relating to a vote of thanks to the Scientific Advisory Committee of the Pan American Zoonoses Center; the contribution of the Inter-American Development Bank to animal health programs and support for the activities of the Pan American Foot-and-Mouth Disease and Zoonoses Centers; the inter-American network of animal disease diagnosis laboratories; the Regional Vesicular Disease Diagnosis Laboratory for Central America and Panama; bilateral agreements on the prevention of foot-and-mouth disease; the Special Fund for Animal Health Research; vesicular stomatitis; coordination by the Pan American Health Organization of an inter-American study on the state of animal health; cooperation of

FAO in foot-and-mouth disease programs; pesticides and contamination of foodstuffs; place of next meeting, 75th anniversary of the Pan American Health Organization; epidemiological surveillance of rabies and equine encephalitis; South American Commission for the Control of Foot-and-Mouth Disease; survival of foot-and-mouth disease virus in milk and other dairy products; and the Pan American Highway--Darién Gap.

Resolution VIII, which deals with the Special Fund for Animal Health Research, is of major importance because of the fundamental role the research now under way at the Pan American Zoonoses and Foot-and-Mouth Disease Centers plays in livestock development in the Americas, as well as the budgetary difficulties of the Centers. In the resolution the countries requested PAHO to act as the technical and administrative organ of this Fund.

The Ministers of Agriculture again expressed their thanks to the Inter-American Development Bank and the United Nations Development Program for the financial support they continue to provide to activities for the control of animal diseases, and requested the two institutions to support the applications submitted by the countries and by PAHO for funds for research projects of the centers and for programs of technical cooperation for the countries.

It is worthy of note that this meeting was attended not only by official delegations from the Ministries of Agriculture but also by representatives of the Ministries of Health. This fact reflects the coordination that is being established between these two ministries in the joint execution of veterinary public health and zoonoses control programs.

The Director presented a report on this meeting to the Executive Committee at its 78th Meeting in June 1977. After studying the documentation the Executive Committee approved the following resolution:

THE EXECUTIVE COMMITTEE,

Having considered the Final Report of the X Inter-American Meeting, at the Ministerial Level, on Foot-and-Mouth Disease and Zoonoses Control (Document RICAZ10/FR);

Bearing in mind the increasing number of requests for technical assistance in the field of animal health and veterinary public health being made to the Organization by the Member Countries that are carrying out programs for the prevention or control of foot-and-mouth disease and other zoonoses;

Recognizing that these diseases are a serious problem for the economic and social development of the countries; and

Recognizing that the Pan American Foot-and-Mouth Disease Center and the Pan American Zoonoses Center are carrying out activities essential to the support of animal health and veterinary public health programs,

RESOLVES:

1. To request the Director to transmit to the Directing Council at its XXV Meeting the Final Report of the X Inter-American Meeting, at the Ministerial Level, on Foot-and-Mouth Disease and Zoonoses Control (Document RICAZ10/FR) contained in Document CE78/7.
2. To recommend to the Directing Council that at its XXV Meeting it examine the possibility of adopting a resolution along the following lines:

THE DIRECTING COUNCIL,

Having considered the Final Report of the X Inter-American Meeting, at the Ministerial Level, on Foot-and-Mouth Disease and Zoonoses Control (Document RICAZ10/FR);

Bearing in mind the importance of the technical cooperation which the Organization is providing to the Governments of the Member countries through the Pan American Foot-and-Mouth Disease and Zoonoses Centers in the planning, operation, and evaluation of animal health programs essential to the prevention, control and eradication of diseases of importance both to man and to animals;

Aware of the increasing number of requests for technical cooperation being made by the countries in the fields of animal health and veterinary public health; and

Bearing in mind the importance of the activities for the training of the human resources necessary for the efficient conduct of animal health and veterinary public health programs being carried out by the above-mentioned Centers,

RESOLVES:

1. To take note of the Final Report of the X Inter-American Meeting, at the Ministerial Level, on Foot-and-Mouth Disease and Zoonoses Control (Document RICAZ10/FR).
2. To thank the Ministers of Agriculture for the support and contributions they are providing to the above-mentioned Centers in order to enable them to solve their financial problems, as stated in Resolutions I, II and VIII appearing in Document RICAZ10/FR.

3. To express their appreciation to the Ministers of Agriculture for their efforts to strengthen the economy and improve the health of the countries of the Hemisphere through programs for the prevention and control of animal diseases.

4. To recommend to the Ministers of Agriculture and Health of the Hemisphere that they continue their combined efforts in a coordinated foot-and-mouth disease and zoonoses control campaign.

Annexes



X INTER-AMERICAN MEETING, AT THE MINISTERIAL LEVEL, ON FOOT-AND-MOUTH DISEASE AND ZONOSSES CONTROL

WORLD HEALTH ORGANIZATION

WASHINGTON, D.C., U.S.A., 14-17 MARCH 1977

RICAZ10/1, Rev. 2 (Eng.)
24 February 1977
ORIGINAL: SPANISH

PROVISIONAL AGENDA

Document No.

1. Preliminary Session. Election of the President, two Vice Presidents, and Rapporteur
2. Inaugural Session. Address by the Director of the Pan American Sanitary Bureau
3. Approval of the Agenda and of the Program of Sessions RICAZ10/1, Rev. 2 and RICAZ10/2
4. Present Status of the Application of the Recommendations and Achievement of the Goals for Animal Health and Veterinary Public Health Established in the Ten-Year Health Plan for the Americas, Approved by the Governing Bodies of the Pan American Health Organization, Santiago, Chile, October 1972
5. Report of the Secretariat on Compliance with the Resolutions of RICAZ IX RICAZ10/24
6. Program and Budget of the Pan American Zoonoses Center RICAZ10/8
7. Program and Budget of the Pan American Foot-and-Mouth Disease Center RICAZ10/12 and Corrig.

Document No.

8. Panel on the Pan American Highway and Foot-and-Mouth Disease
 - A. Importance of the Pan American Highway for Hemispheric Development RICAZ10/9
 - B. Present and Future Status of the Construction of the Pan American Highway RICAZ10/23
 - C. Present Status of Foot-and-Mouth Disease in Colombia RICAZ10/18
 - D. Foot-and-Mouth Disease and its Present Status in Panama RICAZ10/10
 - E. Immediate and Future Measures at the Continental Level for Foot-and-Mouth Disease Control and Prevention RICAZ10/7
9. Panel on the Epidemiology, Diagnosis and Control of Infectious Bovine Rhinotracheitis
 - A. Present Status of Infectious Bovine Rhinotracheitis in the Americas. RICAZ10/15
 - B. Diagnosis of Infectious Bovine Rhinotracheitis RICAZ10/4
 - C. Measures for the Prevention and Control of Infectious Bovine Rhinotracheitis RICAZ10/19
10. Panel on Pesticides and Health
 - A. Pesticide Management Problems of Public Health Concern in Central America RICAZ10/22
 - B. Treatment of Livestock Diseases with Insecticides and their Residual Action in Foodstuffs of Animal Origin RICAZ10/6
 - C. Importance of Regulations for the Use of Pesticides and the Contamination of Foodstuffs RICAZ10/11
 - D. Problems Involved in the Establishment of Laboratories for the Control and Detection of Pesticides: Minimum Standards for their Establishment RICAZ10/5

	<u>Document No.</u>
11. Report on Epidemiological Surveillance of Equine Encephalitis in the Americas	RICAZ10/25
12. Report on Epidemiological Surveillance of Rabies in the Americas	RICAZ10/26
13. Report on Epidemiological Surveillance of Foot-and-Mouth Disease in the Americas	RICAZ10/17
14. International Group for Agricultural Development in Latin America. Objectives and Lines of Action	RICAZ10/20
15. The Inter-American Development Bank and Animal Health Programs in the Americas	
16. Present Status of Bovine Leukemia in the Americas	RICAZ10/14
17. Research Program of the Pan American Zoonoses Center	RICAZ10/13
18. South American Commission for the Control of Foot-and-Mouth Disease. Report of the Fourth Regular Session	RICAZ10/16
19. Report of the Inventory of Veterinary Diagnosis Laboratories in the Americas	RICAZ10/21



PAN AMERICAN HEALTH ORGANIZATION

CD25/19 (Eng.)
ANNEX II



X INTER-AMERICAN MEETING, AT THE MINISTERIAL LEVEL, ON FOOT-AND-MOUTH DISEASE AND ZONOSSES CONTROL

WORLD HEALTH ORGANIZATION

WASHINGTON, D.C., U.S.A., 14-17 MARCH 1977

Provisional Agenda Item 7

RICAZ10/12, Corrig. (Eng.)
1 March 1977
ENGLISH/SPANISH

PROGRAM AND BUDGET OF THE PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

Corrigendum

On Page 24, fourth paragraph, under "Extraordinary contributions,"
the first line should read:

"In response to Resolution V of RICAZ IX, the following"



PAN AMERICAN HEALTH ORGANIZATION



X INTER-AMERICAN MEETING, AT THE MINISTERIAL LEVEL, ON FOOT-AND-MOUTH DISEASE AND ZOOSES CONTROL

WORLD HEALTH ORGANIZATION

WASHINGTON, D.C., U.S.A., 14-17 MARCH 1977

Provisional Agenda Item 7

RICAZ10/12 (Eng.)

3 February 1977

ORIGINAL: ENGLISH-SPANISH

PROGRAM AND BUDGET OF THE
PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER
FOR 1977 AND PROPOSED ESTIMATES FOR 1978

I - INTRODUCTION

A. PROBLEM AND BASELINE SITUATION

Adequate nutrition of the people of Latin America is critical for the overall development of the American Continent. Improvement of nutrition not only is a basic factor for the socio-economic development of the countries but also represents an indication for its success or failure.

The General Assembly of the United Nations has recommended that Member States take in consideration the increased needs of their people for essential higher quality foods in the formulation for the next ten years development programs.

The Ministers of Health of the Western Hemisphere in their meeting in Santiago de Chile in 1972 established proposals for changes and improvements in health policies for the next ten years which can be summarized as follows:

- a) increase of the level of subsistence of each individual;
- b) increase of productivity of communities and of the countries of the Continent.

This implies an increase in productivity and services for the well-being of the people and a need for increased availability and consumption of essential products, among which food is one of the most needed.

Thus, social and economic development in the large majority of the American countries is basically related to agricultural development and to the health of the people. Among other animal diseases, foot-and-mouth disease is responsible for causing heavy damages to livestock and for intensifying the shortage of red protein and milk. The disease affects practically all of South America, and represents a constant threat for the rest of the Continent. Considerable economic losses are due to the frequency of epidemics that affect nearly all domestic animal species except the horse, with grave impairment of production and limitation and losses of the international trade in animals and animal by-products.

Because of the highly contagious characteristics of the disease and extensive movement of animals in the Continent the fight against foot-and-mouth disease (FMD) has to be on a continental scale with all affected countries directly participating. For this purpose the countries of the Continent established the Pan-American Foot-and-Mouth Disease Center in 1951 as an international institution to promote, support and coordinate the struggle against the disease.

The control of this disease involves all the countries of the Americas, and receives important financial support from the Inter-American Development Bank (IDB). All affected countries are carrying out FMD control programs, while the free area countries consolidate their preventive activities.

II - THE PAN-AMERICAN FOOT-AND-MOUTH DISEASE CENTER

A. ORIGIN AND SOURCES OF FINANCING

The Center was created in 1951, as a technical cooperation program of the Organization of American States (OAS), and administered by the Pan-American Sanitary Bureau (PASB). In 1968, it became a regular program of the Pan-American Health Organization (PAHO), financed by contributions from the Organization's Members in accordance with the respective resolutions adopted at meetings of the Inter-American Economic and Social Council (Viña del Mar, Chile, June 1967), the Inter-American Committee on the Alliance for Progress (Rio de Janeiro, Brazil, September-October 1967), and the Directing Council of the Pan American Health Organization (Port-of-Spain, Trinidad and Tobago, October 1967). The Center also receives financial assistance from France, the United Kingdom, and the Kingdom of the Netherlands.

In addition to participating with its own quota, as the other countries, Brazil makes a special contribution for the purchasing of materials and other items required for the upkeep of buildings, installations, lands and for the payment of salaries for maintenance workers.

Support is also given by the Regional Project RLA/73/023 of the United Nations Development Program (UNDP), for the 1976-77 period.

The increases requested for the years 1977 and 1978, of 8.05% and 9.85%, respectively, are not sufficient to cover the expected costs, according to present operation levels and the increasing demand for technical assistance from the countries.

B. PURPOSE AND OBJECTIVES

Purpose

Control, eradication and prevention of foot-and-mouth disease in the Americas.

Objectives

- Preventing the introduction or establishment of foot-and-mouth disease in the area of the Americas which are free of the disease.

- Control and eradication of FMD in South America.
- Promotion and advising of official animal health services charged with the control of FMD.
- Coordination of national programs for the control, prevention and eradication of FMD.
- Promotion, advice and development of a research plan in support of national FMD control programs.
- Cooperation in the training of human resources in charge of executing national programs of FMD prevention, control and eradication.

C. ADMINISTRATIVE AND TECHNICAL ORGANIZATION

The Center's organization includes the Director's Office and four departments: Laboratories, Training and Information, Technical Assistance and Administration.

The Laboratory Department includes the Diagnostic Service, with the Reference Laboratory for the Americas; the Central Laboratory; the Vaccine Production Plant; and the Small Animal Laboratory.

The Training Activities Department is responsible for stipends, organization of training courses and other scientific meetings, the library, publications and information services.

The activities of the Technical Assistance Department are developed through its professionals from the Rio de Janeiro headquarters and through its consultants in several countries. Advisory services are provided in epidemiology, administrative methods, statistics, planning and evaluation of FMD control campaigns.

The Administration Department consists of the following sections: Finances, Personnel, Supplies and General Services.

Each odd year the Scientific Advisory Committee meets at the Center. Its members have international scientific reputations and they discuss, analyze and comment with the Director and the scientific professional staff the various projects either planned or being carried out.

III - LABORATORIES

In 1976, the services and research activities of the laboratories were limited, due to the increasing commitments of staff and physical resources to the Center's training programs, along with a shortage of operational funds and a decrease in the number of professionals and technicians. In view of this situation, activities were concentrated in priority areas, such as the development of oil-adjuvanted vaccines, the intranasal application of attenuated live virus vaccines, and the epidemiological surveillance of some farms.

Serological and immunological studies of field strains continued, as did the improvements in vaccine production and control methods and the carrying out, in the laboratory, of routine tests necessary for epidemiological surveillance activities.

The Reference and Diagnostic Laboratory gave priority to the study of type A strains which were isolated from outbreaks in the South of Brazil (Rio Grande do Sul and São Paulo). In a cross-immunity test carried out with cattle, the reference strain (C₃ Resende) proved to have immunological coverage for the new field strains.

The vaccine production plant functioned at full capacity and carried out some research projects designed to improve production methods. Among these, we may mention the studies to develop optimum conditions for cell growth and production of virus. Special attention was given to the concentration and purification of antigen.

A. DIAGNOSIS AND REFERENCE

The classification of FMD viruses requires a standardized methodology in order to obtain similar and reproducible results which can be interpreted in the same way in each diagnostic center in South America. This requires the maintenance of an up-to-date collection of strains, the standardization of techniques used and frequent meetings of specialized professionals from all the countries.

A complicating factor in the prevention or eradication of FMD is the existence of other disease with similar symptoms, such as vesicular stomatitis, vesicular exanthema and swine vesicular disease; it is thus imperative to have a rapid and precise differential diagnostic service.

The diagnostic and reference laboratory carries out the following activities:

1. Acts as the Reference Center for the Americas, in close cooperation with the World Reference Laboratory.
2. Makes differential diagnoses of vesicular diseases, through samples sent from the countries.
3. Types and subtypes all samples received, in order to know exactly which viruses exist in the field.
4. Carries out serological and immunological classification of all strains which may be epidemiologically important.
5. Maintains an up-to-date strain collection including all strains of wide epidemiological range, classified into important subtypes and adapted to the different systems for antigen production.
6. Coordinates and teaches diagnosis of vesicular diseases on a continental level.
7. Carries out all diagnostic and reference work for the various research projects of the Center.

Since its beginning, the Center has examined approximately 21,000 samples of vesicular diseases from 19 American countries. From 1952 to 1976, 10,301 FMD virus samples from South American countries were diagnosed. Distribution of these samples is shown in Table 1. From 1958 to 1976, the Center identified 20 FMD virus subtypes and 2 of vesicular stomatitis.

During 1976, 2,341 biological samples from FMD-affected countries were typed and subtyped. Of this total, 345 showed cases of FMD which had occurred in the field (Table 2) and also include 1,996 sera from various species which were studied for the presence of VIA.

Diagnostic activities have increased considerably in 1976, since the laboratory gives intensive support to the countries in order to carry out complete comparative studies among the strains used in vaccine production which are epidemiologically important in the field. These studies are designed to determine the coverage of the production strains in terms of those from the field, through serological and immunological relationships obtained by complement fixation and the mouse protection test.

With the III International Diagnostic Seminar for Vesicular Diseases, held at the Center, national diagnostic laboratories personnel are not only trained to identify and classify the etiological agents of these disease through the use of the same technique, but they are also prepared to apply identical concepts in the classification of new subtypes of FMD virus. These concepts are based on studies carried out at the Center, as well as on the conclusions and recommendations adopted at the International FMD Symposium, held October 5-8, 1976, in Lyon, France.

The Center provides sera and reference virus for the countries' diagnostic and control laboratories. During 1976, all the countries of the affected area received biological materials for diagnosis, research and vaccine control (Table 3). Keeping in mind the increase in diagnostic activities carried out in the countries, it is estimated that it will be necessary to increase considerably the amount of biological materials sent to them in the future.

In 1976, 2,210 samples were tested, as part of the research work carried out at the Center.

In terms of typing and subtyping of the vesicular stomatitis virus during 1976, the Center examined 343 samples from Central America and Panama, 227 of which were positive (Table 4). Table 5 summarizes the vesicular samples examined in the period 1967-1968.

The Center continues giving priority attention to vesicular disease diagnostic activities in countries free of FMD. We can assume that samples from this area will increase considerably in the near future.

The Center also provides direct advisory services to member countries through periodic visits to their diagnostic laboratories; these visits are carried out by Center professional staff assigned to this sector.

The Diagnostic and Reference Laboratory carried out the following reasearch projects in 1976:

- Study of the evolution of FMD virus type A in Brazil, with serological classification of strains A Alegrete, A Magé, and A Venceslau.
- Determination of the serological and immunological relationships between current strains of virus A in South America, in order to select the strain with the greatest immunological coverage.

- Improvement of laboratory diagnosis techniques, through physico-chemical purification of VIA and its quantification by immunoelectrodifusion and immunoelectroforesis.

B. INACTIVATED VACCINES

The control of FMD in South America is based primarily on the systematic vaccination of cattle. Vaccines are made with inactivated virus and with aluminum hydroxide as adjuvant. Often they are strengthened by the addition of saponin. However, these vaccines only provide short-term immunity, making revaccination necessary every four months. The objective of the Center's program is to improve each vaccine production phase in order to assure a final product with greater efficacy and efficiency.

The antigen production method most extensively used in South America is cell cultures. Research hopes to determine the optimum conditions and methods for cell culture growth, in monolayers or in suspension and for the multiplication of virus in them.

Virus suspensions used to prepare vaccines contain unwanted cell proteins, making it necessary to purify the virus before preparing the vaccine. This purification process also allows for a better physical determination of the antigenic mass, which will lead to more standardized products. Results obtained to date with virus strains encourage the possibility of continuing this study.

Studies continued on means of stabilizing antigens; the objective of these studies is to prevent the loss of immunogenicity during the vaccine preparation process and storage.

Problems related to industrial-level production of oil-adjuvanted vaccine are also being studied.

The laboratory carried out the following projects during the year:

- Determination of the treatment of cattle serum with polyethylenglycol (PEG) for vaccine production.

- Use of BEI as inactivant in vaccines produced with BHK, Frenkel and suckling mice virus.

- Studies on the toxicity of Arlacel, new formulas for oil-adjuvanted vaccines and double emulsions.

- Production of oil-adjuvanted vaccines in relatively large quantities and their field testing in Brazil (35,000 doses), Argentina (15,000 doses), and Uruguay (3,000 doses).

C. ATTENUATED LIVE VIRUS VACCINES

One of the major efforts of the Center has been the development of attenuated live FMD virus vaccines. Although presently this type of vaccine is partially restricted, because of limitations in the international meat market, research continues to explore its potential under certain conditions.

Experimental work at the Center on this type of vaccine, along with new knowledge about the transmission of the disease and the multiplication of virus in cattle, indicates the feasibility of using attenuated virus vaccines administered nasally or orally. Preliminary results point to the possibility of obtaining an adequate immune response in cattle through intranasal vaccination.

D. VACCINE CONTROL

Vaccine control is undoubtedly one of the major problems which administrators of anti-FMD campaigns in South America are facing. In many instances potency testing of FMD vaccines in cattle has proven impractical. Emphasis is placed on a strong long-range research program to develop practical methods to monitor the vaccine production process at all stages, starting with the selection of virus strains and continuing until the finished product is injected into the animal. Research on reproducible test systems in small laboratory animals, such as guinea pigs, will continue, and attempts will be made to relate the results of those tests to resistance against the disease under conditions comparable to those encountered with field exposure.

Special attention is being given to problems related to the control of oil vaccine potency, for which an experimental program has begun in Uruguay.

E. EPIDEMIOLOGICAL STUDIES

The following epidemiological studies were carried out this year:

Serological survey of the sheep population in the Cochabamba Valley, Bolivia, in cooperation with the Ministry of

Peasant and Agricultural Affairs and the Food and Agriculture Organization of the United Nations (FAO). Its objective was to determine levels of FMD infection.

Development of a project to study the survival of FMD virus in milk products and by-products, to be carried out in cooperation with the Secretariat of State for Agriculture, Argentina.

Epidemiological study of vesicular stomatitis in El Salvador, in cooperation with the Ministry of Agriculture. The Center is analyzing sera for antibodies of Indiana and New Jersey virus from a sample of the country's cattle population.

Epidemiological surveillance of cattle in the municipality of Valença, state of Rio de Janeiro, Brazil, where the oil adjuvant vaccine will be applied, starting in early 1977 on a population of 40,000 cattle.

Field work with the oil adjuvant vaccine, carried out in Bagé, state of Rio Grande do Sul, Brazil, at the Cinco Cruzes Farm, with an animal population of 3,000 cattle, was expanded in December 1976 with the incorporation of 14 farms, having approximately 20,000 cattle. These projects include epidemiological surveillance, immunity level evaluation, collection of information on local reactions and other kinds of adverse reactions which might occur, as well as all the operational aspects of applying oil vaccines.

F. SMALL ANIMAL LABORATORY

Although the primary function of the small animal laboratory continues to be to raise animals for laboratory use, it has also become important as a training area for courses on laboratory animal medicine and colony management.

As planned, a central air-conditioning system was installed in the guinea pig colony; this will hopefully bring about a significant improvement in the production of these animals which previously had suffered from the extreme heat during the summer months. Through a contribution from the Brazilian Ministry of Agriculture, new plastic cages were obtained, which mark an improvement over the old wooden cages.

TABLE 1
 SAMPLES DIAGNOSED BY THE PAN-AMERICAN FOOT-AND-MOUTH DISEASE CENTER,
 BY COUNTRY AND YEAR. SOUTH AMERICA. 1952 - 1976.

Country	1952/70	1971	1972	1973	1974	1975	1976	Total
Argentina	1,480	81	44	48	-	46	69	1,768
Bolivia	82	1	17	-	3	14	1	118
Brazil	5,177	279	441	77	78	73	228	6,353
Colombia	257	11	5	3	-	6	2	284
Chile	36	50	5	3	2	-	17	113
Ecuador	473	14	4	-	2	21	-	514
Guyana	36	-	-	7	-	-	-	43
Paraguay	452	10	-	2	6	52	16	538
Peru	114	31	10	-	-	15	9	179
Uruguay	225	5	7	-	-	-	2	239
Venezuela	107	36	2	-	6	-	1	152
Total	8,439	518	535	140	97	227	345	10,301

TABLE 2

FIELD SAMPLES FROM AMERICAN COUNTRIES AFFECTED BY FOOT-AND-MOUTH DISEASE. 1976.

Country	Foot-and-mouth disease					Neg.	Total
	O ₁	A* Vallée	A24	A27	C ₃		
Argentina	5	57	-	-	7	-	69
Bolivia	-	-	-	-	1	-	1
Brazil	9	162	1	-	8	48	228
Colombia	-	-	-	1	-	1	2
Chile	2	-	-	-	7	8	17
Paraguay	11	2	-	-	3	-	16
Peru**	-	2	-	6	-	1	9
Uruguay	-	2	-	-	-	-	2
Venezuela	-	-	-	-	-	1	1
Total	27	225	1	7	26	59	345

* Samples being studied.

** Also received 4 samples New Jersey and 1 Indiana₁.

TABLE 3

BIOLOGICAL MATERIALS SUPPLIED BY THE PAN-AMERICAN FOOT-AND-MOUTH DISEASE CENTER
TO THE COUNTRIES IN 1976,

Country	Hyper-immune sera (ml)	Hemolysin (ml)	Complement (ml)	VIA (ml)	Anti-VIA serum (ml)	Virus		Cell culture (btl)	Vaccines (doses)	
						(ml)	(g)		Mono-valent	Tri-valent
Argentina	51	-	-	3	10	800	8	5	-	29,000
Bolivia	63	9	-	3	10	-	-	3	-	-
Brazil	800	3	10	24	80	559	54	25	29,000	32,500
Colombia	87	-	-	-	-	-	-	8	5,700	-
Chile	-	-	-	55	100	-	-	-	-	-
Ecuador	69	-	-	3	10	-	-	-	-	-
Spain	-	-	-	3	10	-	-	-	-	-
Paraguay	87	6	-	8	15	-	-	8	-	-
Peru	159	-	-	3	10	10	1	-	5,000	-
Uruguay	129	-	-	3	10	-	9	2	-	-
Venezuela	24	-	-	6	20	-	-	9	-	4,000
Total	1,469	18	10	111	275	1,369*	72**	60	29,700	65,500

* Includes 400 ml of Frenkel virus and 969 ml of BHK virus.

** Includes 40 g of rabbit virus, 16 g of guinea pig virus and 16 g of cattle virus.

TABLE 4

FIELD SAMPLES (EPITHELIUM AND SERUM) FROM FMD-FREE COUNTRIES. 1976.

Country	Vesicular stomatitis			Neg.	Total
	New Jersey	Indiana ₁	New Jersey and Indiana ₁		
Aruba	-	-	-	1	1
Belize	-	-	-	2	2
Costa Rica	31	-	-	12	43
El Salvador	37	1	8	16	62
Guatemala	3	1	-	1	5
Honduras	26	-	2	30	58
Nicaragua	82	4	10	42	138
Panama	10	11	1	12	34
Total	189	17	21	116	343

TABLE 5

VESICULAR SAMPLES FROM CENTRAL AMERICA AND PANAMA EXAMINED AT THE
PAN-AMERICAN FOOT-AND-MOUTH DISEASE CENTER. 1967 - 1976.

Country	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Aruba	-	-	-	-	-	-	-	-	-	1
Belize	-	2	-	-	1	2	5	2	4	2
Costa Rica	3	7	4	4	29	39	18	11	20	43
El Salvador	1	13	9	8	6	10	24	34	32	62
Guatemala	3	1	1	2	19	33	18	3	18	5
Honduras	3	60	11	8	22	19	14	33	31	58
Nicaragua	3	8	6	4	88	15	24	138	153	138
Panama	76	9	8	7	4	3	1	24	31	34
Total	89	100	39	33	169	121	104	245	289	343

IV - TRAINING AND INFORMATION

The consolidation of national FMD prevention programs, particularly in Mexico, Central America and Panama, and of the control and eradication programs in South America, implies a constant need for staff training.

The Center has developed an efficient infrastructure for cooperating with the countries in this effort, which is reflected in the sustained increase of the training requests from the countries. The notable increase for 1976 has been achieved through the Technical Assistance Agreement signed between Brazil and the PAHO, financed through the Technical Assistance Agreement of the Ministry of Agriculture of Brazil/IDB ATP/SF-1026-BR.

A. INDIVIDUAL TRAINING

During 1976, 3 veterinarians from Mexico, 1 from Uruguay and 1 from Venezuela came to the Center to receive individual training in vesicular disease diagnosis and in control of FMD vaccine.

In 1977 an academic in-service training program will begin, based on specific research projects (epidemiology, information systems, oil adjuvant vaccines, attenuated live virus vaccines, and survival of FMD virus in milk and milk by-products) which conform to the specific needs of the countries.

B. COURSES

In 1976 the Center carried out 19 courses, with a total of 245 participants from 12 countries, as follows:

a) Two courses on cell culture and its application to virology, 4 months each, with 10 students, from Brazil (6), Colombia (1), Mexico (1), Dominican Republic (1) and Venezuela (1).

b) Two courses on laboratory animal medicine, management and installations of small animal laboratories, 3 months each, with 8 students, from Brazil (6), Colombia (1), and Guatemala (1).

c) One course on vesicular disease diagnosis, 3 months, with the participation of 7 veterinarians, from Brazil (4), Colombia (2), and Chile (1).

d) One course on the production and control of FMD vaccines, 9 months, with 5 students, from Bolivia (1) and Brazil (4).

e) One course on information systems (statistics), 5-1/2 months, with 15 veterinarians, from Brazil (10), Guatemala (1), Panama (1), Peru (2) and Venezuela (1).

f) One course on epidemiology, 5-1/2 months, with 15 students, from Brazil (10), Ecuador (1), Honduras (1), Peru (2) and Venezuela (1).

g) One communications course, 4 months, with 14 Brazilian students.

h) One vaccine efficacy control course, 2 months, with 2 Brazilian participants.

i) One vaccine elaboration control course, 2 months, with 3 Brazilian participants.

j) Four courses for field veterinarians, each one month, with 86 participants, from Bolivia (1), Brazil (83) and Paraguay (2).

k) Four courses for field veterinarians, one week each, with the participation of 77 Brazilian professionals.

The large proportion of Brazilian students in the courses conforms to the Technical Assistance Agreement signed in 1976 between the Ministry of Agriculture of Brazil and the PAHO, in effect until November 1977.

For 1977, 14 training courses are planned for 225 participants, with two courses in administration added to those listed above. After 1977, this extensive training program can only be followed up if new sources of financing are obtained.

C. SEMINARS

From 16 to 26 November 1976, a seminar on vesicular disease diagnosis was held at the Center. Twelve serologists from 8 countries participated: Argentina (1), Bolivia (1), Brazil (9), Colombia (1), Ecuador (1), Paraguay (1), Peru (1) and Uruguay (1).

From 1977 to 1980, 2 seminars will be held each year, on subjects of interest to both free and affected countries. In 1977, a seminar will be held on the eradication of outbreaks and another on vaccine control.

Table 6 shows the number of professionals from the various countries who received training at the Pan-American Foot-and-Mouth Disease Center from 1952 to 1976.

D. INFORMATION

The bi-weekly report published by the Center continued its regular schedule. It provides knowledge on the occurrence of vesicular diseases on the Continent.

Four issues of the Center's Boletín were published, putting this publication nearly on schedule, after delays caused by lack of printing equipment, which have now been resolved. During 1977, it is planned that the Boletín will attain its regular schedule once more.

During 1976, 7 new titles in the Teaching Manual Series were published, and 6 in the Bibliography Series.

The Center gives high priority to information activities, attempting to improve and systematize them, according to available resources.

TABLE 6

Number of professionals who received individual training or participated in courses or seminars at the Pan-American Foot-and-Mouth Disease Center, 1952-1976.

Countries	1952/60	1961/70	1971	1972	1973	1974	1975	1976	Total
Dutch Antilles	2	-	-	-	-	-	-	-	2
Argentina	44	14	4	1	2	8	6	2	81
Bahamas	2	-	1	-	-	-	-	-	3
Barbados	-	1	-	-	-	-	-	-	1
Belize	-	-	2	-	-	-	1	-	3
Bolivia	6	12	3	2	-	-	6	2	31
Brazil	73	84	26	84	78	114	192	233	884
Canada	1	-	-	-	-	-	-	-	1
Colombia	34	24	4	2	24	4	3	7	102
Costa Rica	8	3	6	2	-	-	2	-	21
Cuba	5	2	1	-	-	-	-	-	8
Chile	12	15	1	3	2	3	1	1	38
Ecuador	7	23	3	1	2	9	9	2	56
Egypt	1	-	-	-	-	-	-	-	1
El Salvador	5	2	2	1	24	-	2	-	36
U.S.A.	10	3	-	-	1	-	-	-	14
Grenada	-	-	1	-	-	-	-	-	1
Guatemala	6	4	2	4	-	-	2	2	20
French Guiana	3	-	-	-	-	-	-	-	3
Guyana	4	2	2	-	-	-	-	-	8
Haiti	1	-	-	-	-	-	-	-	1
Honduras	4	4	2	1	-	-	2	1	14
Jamaica	4	-	-	1	1	-	-	-	6
Japan	-	-	1	-	-	-	-	-	1
Martinique	2	-	-	-	-	-	-	-	2
Mexico	3	9	-	1	2	1	2	4	22
Montserrat	-	-	1	-	-	-	-	-	1
Nicaragua	3	3	3	1	-	-	2	-	12
Panama	14	6	4	1	2	-	8	1	36
Paraguay	8	20	5	9	2	8	3	3	58
Peru	8	13	-	3	2	-	6	6	38
Dominican Rep.	3	2	1	-	-	1	-	1	8
Surinam	1	1	9	1	-	-	-	-	12
Trinidad and Tobago	2	1	1	-	-	-	-	-	4
Uruguay	15	16	2	3	3	6	1	2	48
Venezuela	7	21	2	4	2	2	2	4	44
Total	298	285	89	125	147	156	250	271	1621

V - TECHNICAL ASSISTANCE

Since the great majority of Center activities involve technical assistance, this chapter will be limited to the actions developed at the country level. To this effect, the Center has attached consultants in Panama, Colombia, Ecuador, Paraguay, Chile and Argentina (Director of the Animal Health Planning Course of the PAHO). The work of these consultants is complemented by visits from headquarters specialists.

The consultants operate in cooperation with the heads of national FMD control programs and at high levels of the respective ministries of agriculture, when this is necessary. Their primary responsibilities can be resumed in the following points: technical advisory services in planning, organizing, carrying out and evaluating programs; consulting services; local coordination among neighboring countries and application of advisory services required by the Center's headquarters.

Coverage of priority attention areas in the Americas is carried out according to the following grouping of countries, with the consultants' situations indicated:

<u>Country</u>	<u>Consultancy Headquarters</u>
Central America and Panama	Panama City
Colombia and Venezuela	Bogotá
Ecuador and Peru	Quito
Bolivia and Paraguay	Asunción
Argentina and Chile	Santiago
Brazil and Uruguay	Rio de Janeiro

Technical assistance for Brazil and Uruguay is provided by the Center's headquarters.

A. COUNTRIES IN FMD-FREE AREAS

Canada, the United States of America, Mexico, Central America, Panama, the countries, territories and islands of the Caribbean, Guyana, Surinam, French Guiana and Chilean and Argentine Patagonia continue free of FMD.

Mexico, the countries of Central America and Panama represent the sector of greatest risk in the prevention of FMD, due especially to their territorial continuity with infected areas, and the confusion created by the endemic existence of

vesicular stomatitis in all these countries. Progress in the construction of the Pan American Highway, along with colonization of the territory surrounding it, significantly increases this risk.

Surveillance of vesicular stomatitis is essential to the prevention of FMD. The only countries of the free area which have laboratories for the identification of causal agents of vesicular diseases are Canada, the United States of America and Mexico; and these, for security reasons, only take care of their individual needs. For all the other countries, this service is provided by the Diagnostic and Reference Laboratory of the Pan American Foot-and-Mouth Disease Center. This activity has continued to increase significantly in recent years, because of the evolution of epidemiological surveillance programs in Central America and Panama, as can be seen in Table 5. The vital interest of the countries and the need to consolidate these programs permits the assumption that these increases will continue in the future. According to Resolution XVII of RICAZ 8, the Pan American Health Organization carried out a study to establish in Panama a Regional Laboratory for the Diagnosis of Vesicular Diseases, for that country and those of Central America. The UNDP approved the financing of this project, RLA/75/045, for 4 years, which will be carried out by the Center.

The implementation of this project has been delayed through difficulties in concretizing the necessary agreements for the ceding of installations. Presently, the availability of a laboratory in the Panama Canal Zone is being studied.

During 1976 the Center examined 343 samples of vesicular diseases coming from Aruba, Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama; results can be seen in Table 4. In 189 cases, vesicular stomatitis virus type New Jersey was diagnosed, in 17 cases type Indiana₁, in 21 cases virus types New Jersey and Indiana₁, and 116 samples were negative.

B. AFFECTED-AREA COUNTRIES

All countries affected by FMD, located in South America, are presently carrying out national plans for the control of the disease.

Besides diagnosis, general research and formation of human resources, those aspects which require the most technical advisory services at present, and for the foreseeable future, are production and control of vaccine, establishment of information systems and epidemiological surveillance, review of the administrative

organization, planning of laboratories, small animal laboratories and animal quarantine stations, animal movement control posts, diagnoses of situation in order to reformulate programs, evaluation of programs and consolidations of cooperation agreements between neighboring countries for the control of FMD.

One element which merits special emphasis is the development of a continental epidemiological surveillance system for vesicular diseases, proposed in some countries, particularly in the Brazilian state of Rio Grande do Sul and Paraguay. They are structured to serve the entire animal health sector. The formation of human resources in the countries is planned in the Center's training program, as well as in a special project with UNDP, although the development of the system implies a periodic assistance by experts from the Center headquarters in the countries themselves.

Dedication is also required for the process of program evaluation, and the experience gained from the application of the evaluation guide developed in 1974 should be taken advantage of.

VI - ADMINISTRATION

Administration is the support level of the Pan-American Foot-and-Mouth Disease Center, covering the areas of finance, personnel, supplies and general services. During 1976, activities were developed which may be summarized as follows:

A. FINANCES

A program of adjustments in the procedures and systems of financial management was developed. The accounting system was integrated with the accounting for agreements in force, in order to establish a register of operations and the liquidation of their economic movement. This unit was reinforced through the training of its staff and assignment of new employees in established vacancies.

Budget

The comparative budget situation for the years 1976, 1977 and 1978 is as follows:

Budget (in US\$)	1976	1977	1978
a) Personnel	1,794,503	1,934,635	2,094,295
b) Operational costs	456,201	497,155	576,880
Total Budget	2,250,704	2,431,790	2,671,175
Annual increase		8.05%	9.84%

Within operational costs, the greatest expense is Supplies and Equipment, which is shown along with other important items below:

Budget (in US\$)	1976	1977	1978
a) Supplies and equipment	170,925	179,759	213,880
b) Service-related travel	101,750	114,201	135,000
c) Common services	80,230	81,495	103,850
d) Training stipends	64,716	65,000	80,000
e) Other	38,580	56,700	44,150
Total operational costs	456,201	497,155	576,880
Percentage of budget	20.3%	20.4%	21.6%

The percentage of budget expenses for 1977 areas follows:

	<u>Budget/77</u>	<u>Percentage</u>
a) Personnel costs	1,934,635	79.6
b) Operational costs	497,155	20.4
Total	<u>2,431,790</u>	<u>100.0</u>

Considering that attention to the countries of the America in the prevention, control and eradication of FMD should be permanent and systematic, it is necessary to underline the urgent need to increase the percentage given to operational costs, which for 1977 was 20.4%.

The Center, adopting a policy of increasing its sources of financing, has coordinated efforts with the UNDP to obtain the approval of 2 projects: one for epidemiological surveillance of FMD and other communicable disease of animals, and the other for the introduction of oil-adjuvant FMD vaccine in the countries.

Extraordinary contributions

In response to Resolution V of RICAZ- , the following Governments gave extraordinary contributions:

a) Brazil (Cruzeiros 800,000)	US\$ 66,666.67
b) Colombia (Pesos Colomb. 179,500)	5,000.00
c) Ecuador (Suces 250,000)	10,000.00
d) Venezuela (Bolívares 21,000)	4,927.00

Besides these cash contributions, the Brazilian Government supported the Technical Assistance Agreement Brazil/IDB with the following contributions:

100 complete boxes for guinea pigs	- Cr\$ 99,570	
25 bookcases	- 75,150	
1 IBM Electronic Composer Typewriter	- 195,000	
		<u>Cr\$369,920=US\$30,180</u>

Uruguay contributes laboratory animals, cattle, inputs and personnel in a value estimated at US\$50,000.

The Oil Vaccine Field Research Project was established with the Brazilian Government, which will last for 4 years. In 1976, the Center received 300,000 cruzeiros for this project, equalling US\$25,000.

Finally, the National Syndicate of Industries for Animal Defensives (SINDAN) contributed 60,000 Cruzeiros (US\$5,000) for

the 25th Anniversary of the Pan-American Foot-and-Mouth Disease Center (27 August 1976) as follows:

PFIZER Laboratory	Cr\$ 10,000
WELLCOME "	" 20,000
VALLÉE "	" 10,000
NOLI "	" 10,000
Rhodia Merieux S.A. Veterinary Inst.	" 10,000
	<u>Cr\$ 60,000 = US\$ 5,000</u>

B. PERSONNEL

Personnel affairs are carried out as rapidly as possible and within the terms of existing legislation. Agreements were begun for the review and bringing up-to-date of job descriptions, as well as adjustments in the structure of personnel by operational units at the Center.

Personnel requirements

In order to carry out satisfactorily the Center's programmed goals, in order to attend the ever-increasing needs of the countries of the Americas, the following personnel should be returned to the 1978 budget:

a) 1 specialist in laboratory animal breeding	- P4
b) 1 serologist	- P4
c) 1 research officer	- P4
d) 1 communications officer	- P4
e) 1 publications technician	- P4
f) 1 consultant in campaign evaluation	- P4
g) 1 systems analyst	- P4
h) 1 budget officer	- P2
i) 2 laboratory assistants	- G5
j) 2 laboratory assistants	- G4

These posts required for 1978 were eliminated from the budget project for 1977.

Presently, the Center's personnel includes those shown in Table 7.

C. SUPPLIES AND WAREHOUSE

A program for the adjustment of the supplies and warehouse system was implemented, with emphasis on those aspects of purchasing

and consumption which tend to reduce operational costs and rationalize expenses. Records of consumption by units work were begun, which will allow for a more adequate use of material.

D. GENERAL SERVICES

Transportation

Nine transportation units were acquired as a result of the sale of unused cars. Financing was obtained for the purchase of transportation units, principally for the bus used to transport personnel from Rio de Janeiro to the municipality of Duque de Caxias (100 kms round-trip per day). Control of repair purchases were strengthened, as well as other consumption in this unit.

Maintenance

Maintenance work was carried out using labor available within the Center. Some units of the buildings were remodeled at reduced costs.

E. OTHER

Agreements

The Technical Assistance Agreement Brazil/PAHO is in effect until November 1977. Balances and other liquidations were sent to the respective authorities for the 1976 budget for the Agreements of the Pilot Plant IDB/PAHO and that of Technical Assistance Brazil/PAHO.

The Technical Assistance Agreement Brazil/IDB (ATP/SF-1026-BR) applied the sum of US\$172,113.83 for 1976 in support of the training program developed by the Center within the context of the Technical Assistance Agreement, Brazilian Ministry of Agriculture/PAHO.

In December 1976 the IDB/PAHO Agreement (ATN/TF-1100-CS) ended, corresponding to the 1976 budget resources on the order of US\$7,034.78 for training of professionals from the various countries of the Americas.

Training of human resources

Administration participated with its specialization themes in the courses of Epidemiology and Information Systems, as well as Communications and Health Education. Informal seminars on

administration with personnel within this sector continue, with the purpose of improving the Centers' support services.

Service-related travel

Table 8 shows travel of Center staff by country and activity. From a total of 91 trips, 73 were made within the FMD-affected area, and included 288 working days; 15 within FMD-free areas during 65 working days, and 3 to Europe for 14 days, totaling 367 working days.

F. MANAGEMENT OF ADMINISTRATIVE DOCUMENTS AND CORRESPONDENCE

The management of administrative documents and correspondence responds to a system of centralization by areas and by topics, respectively.

During 1976 the following figures were recorded:

1. Administrative documentation

a) Various documentation procedures	4,758
b) Pay vouchers PAHO	1,375
c) Other services pay vouchers	247
d) Supply requisitons	1,483
e) Orders for local purchases	634
f) Orders for foreign purchases	38

2. Correspondence

a) Correspondence received (letters, memos, telegrams, etc.)	5,562
b) Correspondence sent (letters, memos)	1,943
c) Telegrams, telex, etc., sent	1,157

3. Others

a) Personnel correspondence (vacation requests, leave, insurance, etc.)	4,011
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G. MOVEMENT OF PROFESSIONAL PERSONNEL

Dr. Mário V. Fernandes, who was Director of the Center, was named Head of the Department of Human and Animal Health in our Central Office in Washington, as of 12 March 1976.

Mr. Humberto F. Angulo Navajas, of Bolivia, assumed the functions of the Center's Administrator on 29 March 1976, promoted from Quito, Ecuador.

On 1 May 1976, Dr. Raúl Casas Olascoaga, of Uruguay, became the new Director of the Center.

H. ORGANIZATION CHART OF THE PAN-AMERICAN FOOT-AND-MOUTH DISEASE CENTER

Table 9 presents the Center's organization chart with its present structure.

TABLE 7

PAN-AMERICAN FOOT-AND-MOUTH DISEASE CENTER STAFF. 1977.

1. Type and number of staff

a) PAHO program	
- International staff	22
- International staff (vacant)	6
- Local staff	135
- Local staff (vacant)	6
- Staff in commission (Washington)	2
	<u>171</u>
b) FAO Program	2
c) U.S. Air Force	1
d) Contractual services (monthly basis)	16
e) Ministry of Agriculture Program	60
f) Special services (IDB)	1
g) Special contracts (laboratory assistants)	6
Total Center staff	<u>257</u>

2. Professional staff

The professional staff of the Center as of 31 December 1976 is as follows:

Abaracón, Daniel	(Uruguay)	Vaccine Consultant
Alonso Fernández, Albino	(Spain)	Serologist
Angulo Navajas, Humberto F.	(Bolivia)	Administrator
Astudillo, Vicente	(Chile)	Biostatistician
Augé de Mello, Paulo	(Brazil)	Research Officer
Balmaceda Fernández, Osvaldo	(Argentina)	Consultant in Administrative Methods
Casas Olascoaga, Raúl	(Uruguay)	Director
Centeno, Eduardo R.	(Argentina)	Biochemist
Costa, Kleise de Freitas	(Brazil)	Assistant Researcher
Chain, Patricia	(USA)	Communications Officer
Faria, José Freire de	(Brazil)	Consultant stationed in Asunción
Ferreira, Maria Elma V.	(Brazil)	Assistant Researcher
Gaggero, Aldo	(Chile)	Consultant stationed in Bogotá
Giacometti Viera, Homero	(Uruguay)	Research Officer
Goic M., Roberto	(Chile)	Chief, Field Activities

Cont. Table 7

Gomes, Ivo	(Brazil)	Principal Associate Researcher
Honigman, Moysés Natan	(Brazil)	Consultant stationed in Quito
Hugh-Jones, Martin	(England)	Regional Veterinarian
Málaga, Hernán Alfredo	(Peru)	Epidemiologist
Mesquita, Julio de A.	(Brazil)	Associate Researcher
Mónaco, W.G. Horacio	(Argentina)	Chief, Training and Information Activities
Moscoso, Víctor Hugo	(Ecuador)	Consultant stationed in Santiago
Rosenberg, Félix J.	(Argentina)	Epidemiologist
Sandoval, Miguel A.	(El Salvador)	Consultant stationed in Panama
Schilling, Paul W.	(USA)	Veterinarian Specialist in Laboratory Animals
Sündahl, Magnus Ståel	(Brazil)	Associate Researcher
Sutmöller, Paul	(Holland)	Chief, Laboratories
Vieira, Antonio	(Brazil)	Principal Associate Researcher

TABLE 8
SERVICE-RELATED TRAVEL BY COUNTRY AND ACTIVITY
1976^{a/}

Country	Direc- tor	Adminis- trator	Chief of			Advisors in		Area * Consul- tants	Total
			Lab.	Field Serv.	Train.	Lab.	Field		
AMERICA									
<u>FMD-affected area</u>									
Argentina	3		2	1		3		3	12
Bolivia		1		1					2
Brazil**	6		1	4	1	5		7	24
Colombia	1		1	1		1			4
Chile	1			1		1	1		4
Ecuador				1					1
Paraguay						1	3		4
Peru				2		1	2	2	7
Uruguay				1		7	1		9
Venezuela			1	1		1		3	6
Subtotal	11	1	5	13	1	20	7	15	73
<u>FMD-free area</u>									
Costa Rica								2	2
El Salvador								3	3
U.S.A.	2	1	1						4
Guatemala								2	2
Mexico						1			1
Nicaragua								3	3
Subtotal	2	1	1			1		10	15
EUROPE									
France	1								1
England	1						1		2
Subtotal	2						1		3
TOTAL	15	2	6	13	1	21	8	25	91

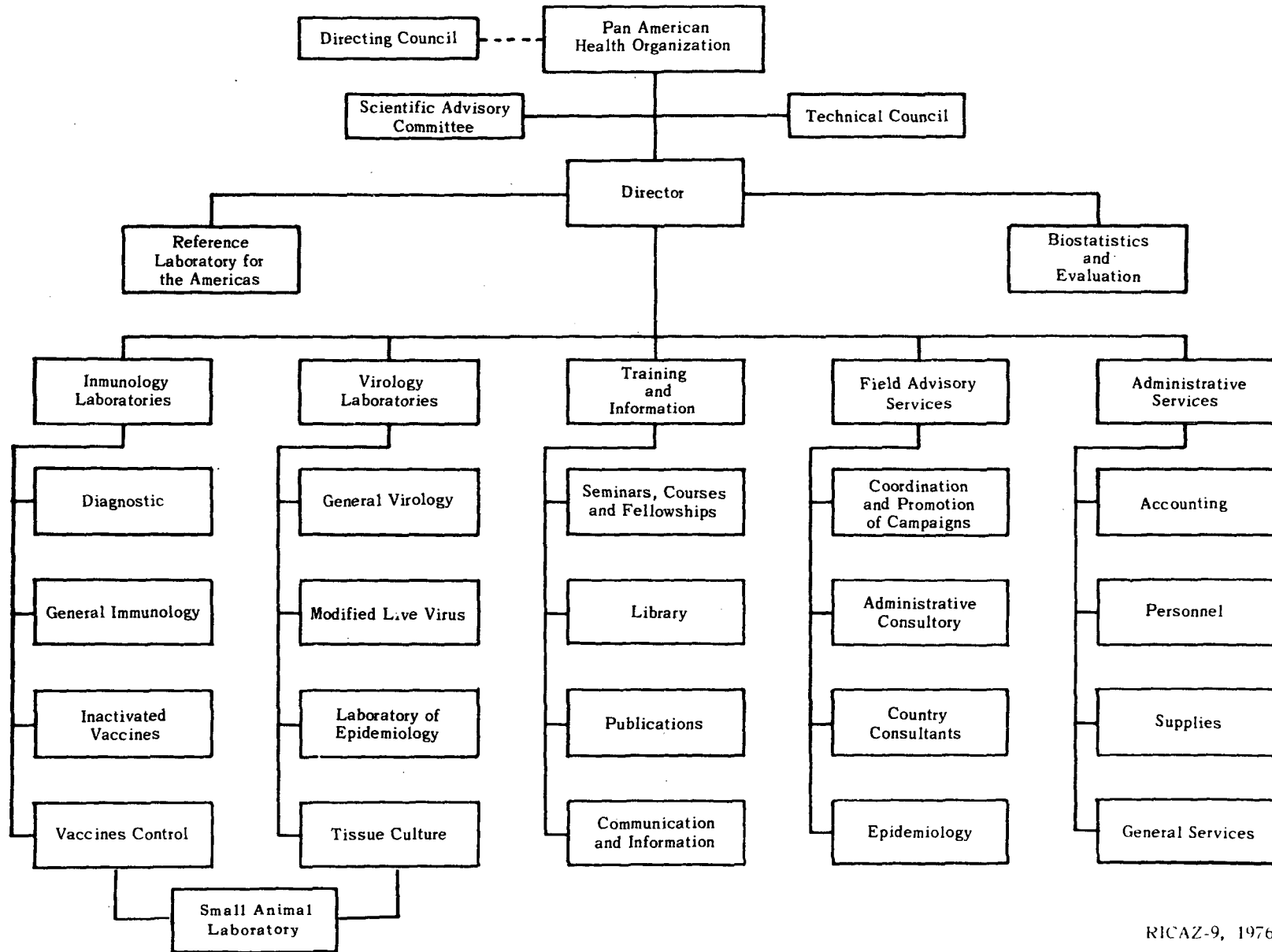
a/ As of 30 November.

* Travel outside duty-station country.

** Travel to advise vaccine programs and other research is not included, only those trips to places far away from Rio de Janeiro are considered.

TABLE 9

ORGANIZATIONAL CHART OF THE PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER



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PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

BREAKDOWN OF THE BUDGET IN ACCORDANCE WITH THE PROGRAM OF DIRECT SERVICES TO GOVERNMENTS

1977 - 1978

YEAR	LABORATORY SERVICES (a)		FIELD SERVICES FOR PREVENTION AND CONTROL PROGRAMS (b)		TRAINING (c)		RESEARCH (d)		ADMINISTRATION (e)		TOTAL BUDGET	
	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT	%
1977	583,630	24.0	673,606	27.7	401,245	16.5	688,196	28.3	85,113	3.5	2,431,790	100.0
1978	641,082	24.0	739,915	27.7	440,744	16.5	755,943	28.3	93,491	3.5	2,671,175	100.0

- (a) Includes the item for diagnostic and reference laboratories and costs of laboratory consultants providing direct services to Governments and the cost of supplies sent to the countries.
- (b) In addition to the budget for field advisory services, includes costs of personnel and administrative staff of field studies on vaccines, epidemiology of the disease, carriers, etc., carried out jointly by the field advisory and laboratory departments. Also includes cost of meetings.
- (c) These funds include the budget of the Training Department (personnel, fellowship, national and international courses, short-term consultants, supplies and equipment, and publications) and the costs of personnel, supplies and other administrative costs for other departments involved in training.
- (d) Includes the costs of research undertaken by headquarters laboratories in coordination with the institutes or laboratories of some countries. Includes costs of personnel, supplies and equipment, and administrative costs.
- (e) Funds intended for the general administration costs of the Center - finances, supplies and general services.

PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

BREAKDOWN OF THE BUDGET FOR 1977

Regular Budget	Office of Director	Laboratory Activities*	Training Activities	Field Advisory Services	Administrative Services	General Supporting Services	Total	% of Total
1. Personnel - Posts	127,780	1,026,795	120,880	525,580	126,600	-	1,927,635	79.3
2. Personnel-Consultants	-	-	7,000	-	-	-	7,000	0.2
3. Duty Travel	17,035	28,006	5,090	66,070	-	-	116,201	4.8
4. Printing and Binding	-	-	6,550	-	-	-	6,550	0.2
5. Seminar and Conference Costs	-	-	-	-	-	50,000	50,000	2.1
6. Hospitality	-	-	-	-	-	150	150	0
7. Supplies and Equipment	-	99,547	15,682	5,680	4,850	54,000	179,759	7.4
8. Fellowships	-	-	65,000	-	-	-	65,000	2.7
9. Common Services	-	8,880	12,260	500	2,090	55,765	79,495	3.3
10. Contractual Services								
Total	144,815	1,163,228	232,462	597,830	133,540	159,915	2,431,790	100
Percentage of Total	5.9	47.8	9.6	24.6	5.5	6.6	100	

* Laboratory activities include research, training and field services

PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

BUDGET

1 January - 31 December 1977

<u>Office of the Director</u>	<u>144,815</u>
Salaries and allowances	127,780
Professional Staff (3)	
Director, P.6 (transferred to WAS)	
Director, P.5 (present)	
Administrative Officer, P.4	
Local Staff (3)	
Duty travel	<u>17,035</u>
<u>Research activities</u>	<u>1,163,228</u>
Salaries and allowances	1,026,795
Professional Staff (10)	
Chief of Laboratories, P.5	
Serologist, P.4	
Research Officer, P.4	
Biochemist, P.4	
Small Animal Breeding Specialist, P.4	
Research Officer, P.4	
Research Officer, P.4	
Serologist, P.4	
Technical Officer, P.2	
Technical Officer, P.1	
Local Staff (114)	
Duty travel	28,006
Supplies and equipment	99,547
Supplies	89,547
Equipment	<u>10,000</u>
Common services	<u>8,880</u>

1977 BUDGET (continued)

<u>Training activities</u>	<u>232,462</u>
Salaries and allowances	120,880
Professional Staff (3)	
Chief of training activities, P.4	
Communication officer, P.4	
Technical publications officer, P.4	
Local Staff (9)	
Duty travel	5,090
Short-term consultants	7,000
Fellowships	65,000
<u>Residents</u>	40,280
24 fellows from:	
Argentina (1),	
Bolivia (2), Brazil (2),	
Chile (1), Colombia (2),	
Cuba (1), Dominican	
Republic (1), Ecuador (2),	
Guatemala(1), Haiti (1),	
Jamaica (1), Panama (1),	
Paraguay (2), Peru (2),	
Uruguay (1), Venezuela (2),	
United States of America (1)	
<u>Seminars</u>	
In Rio de Janeiro, Brazil	12,360
11 fellows from:	
Argentina (1),	
Brazil (2), Paraguay (1),	
Bolivia (1), Ecuador (1),	
Colombia (1), Venezuela (1),	
Peru (1), Chile (1),	
Uruguay (1)	

1977 BUDGET (continued)

Seminar in Guatemala	<u>12,360</u>	
12 fellows from: Nicaragua Guatemala, Panama, El Salvador, Honduras, Costa Rica, Cuba, Haiti, Dominican Republic, Jamaica, Guyana, Surinam		
Printing and Binding		6,550
Supplies and equipment		15,682
Supplies	15,682	
Common services		<u>12,260</u>
<u>Advisory services</u>		<u>597,830</u>
Salaries and allowances		525,580
Professional Staff (15)		
Chief of field services, P.5		
Veterinarian, P.4		
8 Country consultants, P.4		
Administrative consultant, P.4		
Biostatistician, P.4		
Vaccine consultant, P.4		
Statistician, P.4		
Campaign Evaluation consultant, P.4		
Local Staff (6)		
Duty travel		66,070
Supplies and equipment		5,680
Supplies	5,680	
Common services		<u>500</u>

1977 BUDGET (continued)

<u>Administrative Services</u>		<u>133,540</u>
Salaries and allowances		126,600
Local Staff (11)		
Supplies and equipment		4,850
Supplies	4,850	
Common services		<u>2,090</u>
<u>General Supporting Services</u>		<u>159,915</u>
Supplies and equipment		54,000
Supplies	34,000	
Equipment	<u>20,000</u>	
Common services		55,765
Hospitality		150
Meetings		50,000
Technical Council Meeting	34,000	
Duty travel	11,500	
Per diem	10,000	
Short-term consultants	3,500	
Interpreters	6,000	
Local transportation, printing and general services	1,500	
Secretariat personnel	<u>1,500</u>	
Scientific Advisory Committee	<u>16,000</u>	
Duty travel	10,000	
Per diem	<u>6,000</u>	
TOTAL		<u>2,431,790</u>

PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

1977 BUDGET

LABORATORY ACTIVITIES

	Total	% of Total
<u>Personal Services and Allowances</u>		
International Staff	253,485	21.8
Local Staff	773,310	66.5
<u>Duty Travel</u>	28,006	2.4
<u>Supplies and Equipment</u>	99,547	8.6
<u>Common Services</u>	8,880	0.7
Total	1,163,228	100
% of Total	100	

PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

1977 BUDGET

FIELD ADVISORY SERVICES

	Regional Advisers	Advisers at Headquarters	Total	% of Total
<u>Personal Services and Allowances</u>				
International Staff	234,450	241,000	475,450	79.5
Local Staff		50,130	50,130	8.4
<u>Duty Travel</u>	25,696	40,374	66,070	11.1
<u>Supplies and Equipment</u>	-	5,680	5,680	0.9
<u>Common Services</u>	-	500	500	0.1
<u>Total</u>	<u>260,146</u>	<u>337,684</u>	<u>597,830</u>	<u>100</u>
<u>% of Total</u>	<u>43.5</u>	<u>56.5</u>	<u>100</u>	

PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

BREAKDOWN OF THE BUDGET FOR 1978

Regular Budget	Office of Director	Laboratory Activities*	Training Activities	Field Advisory Services	Administrative Services	General Supporting Services	Total	% of Total
1. Personnel - Posts	134,525	844,225	128,055	558,735	134,825	285,930	2,086,295	78.1
2. Personnel-Consultants	-	-	8,000	-	-	-	8,000	0.3
3. Duty Travel	31,762	36,482	6,941	63,815	-	-	139,000	5.2
4. Printing and Binding	-	-	10,000	-	-	-	10,000	0.4
5. Seminar and Conference Costs	-	-	-	-	-	34,000	34,000	1.3
6. Hospitality	-	-	-	-	-	150	150	0.1
7. Supplies and Equipment	-	116,350	17,680	7,650	6,200	66,000	213,880	7.9
8. Fellowships	-	-	80,000	-	-	-	80,000	3.0
9. Common Services	-	11,880	17,260	2,500	4,090	64,120	99,850	3.7
10. Contractual Services	-	-	-	-	-	-	-	-
Total	166,287	1,008,937	267,936	632,700	145,115	450,200	2,671,175	100
Percentage of Total	6.2	37.8	10.0	23.7	5.4	16.9	100	

* Laboratory activities include research, training and field services

PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

BUDGET

1 January - 31 December 1978

<u>Office of the Director</u>	<u>166,287</u>
Salaries and allowances	134,525
Professional Staff (3)	
Director, P.6	
Director, P.5	
Administrative officer, P.4	
Local Staff (3)	
Duty travel	<u>31,762</u>
<u>Research activities</u>	<u>1,008,937</u>
Salaries and allowances	844,225
Professional staff (11)	
Chief of Laboratories, P.5	
Serologist, P.4	
Research Officer, P.4	
Biochemist, P.4	
Small Animal Breeding Specialist, P.4	
Serologist, P.4	
Research Officer, P.4	
Research Officer, P.4	
Vaccine Consultant, P.4	
Technical Officer, P.2	
Technical Officer, P.1	
Local Staff (72)	
Duty travel	36,482
Supplies and equipment	116,350
Supplies	106,350
Equipment	<u>10,000</u>
Common services	<u>11,880</u>

1978 BUDGET (continued)

<u>Training activities</u>	<u>267,936</u>
Salaries and allowances	128,055
Professional staff (3)	
Chief of training activities, P.4	
Communication officer, P.4	
Technical publications officer, P.2	
Local staff (9)	
Duty travel	6,941
Short-term consultants	8,000
Fellowships	80,000
<u>Residents</u>	52,760
24 fellows from: Argentina (1), Bolivia (2), Brazil (2), Chile (1), Colombia (2), Cuba (1), Dominican Republic (1), Ecuador (2), Guatemala(1), Haiti (1), Jamaica (1), Panama (1), Paraguay (1), Peru (2), Uruguay (1), Venezuela (2), United States of America (1)	
<u>Seminars</u>	
In Rio de Janeiro, Brazil	13,620
11 fellows from: Argentina, Bolivia, Brazil (2), Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela	

1978 BUDGET (continued)

Seminar in Panama	<u>13,620</u>
11 fellows from: Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua Panama, Surinam	
Printing and Binding	10,000
Supplies and Equipment	17,600
Supplies	17,680
Common services	<u>17,260</u>
<u>Advisory Services</u>	<u>632,700</u>
Salaries and allowances	558,735
Professional staff (14)	
Chief of field services, P.5	
Veterinarian, P.4	
8 Country consultants, P.4	
Biostatistician, P.4	
Statistician, P.4	
Administrative consultant, P.4	
Campaign Evaluation consultant, P.4	
Local staff (6)	

1978 BUDGET (continued)

Duty travel		63,815
Supplies and equipment		7,650
Supplies	7,650	
Common services		<u>2,500</u>
<u>Administrative services</u>		<u>145,115</u>
Salaries and allowances		134,825
Local staff (11)		
Supplies and equipment		6,200
Supplies	6,200	
Common services		<u>4,090</u>
<u>General supporting services</u>		<u>450,200</u>
Salaries and allowances		285,930
Meetings		34,000
Technical Council Meeting		
Duty travel	13,000	
Per diem	10,000	
Short-term consultants	2,000	
Interpreters	6,000	
Local transportation, printing and general services	1,500	
Secretariat personnel	<u>1,500</u>	
Hospitality		150
Supplies and equipment		66,000
Supplies	36,000	
Equipment	<u>30,000</u>	
Common services		<u>64,120</u>
T o t a l		<u><u>2,671,175</u></u>

PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

1978 BUDGET

LABORATORY ACTIVITIES

	Total	% of Total
<u>Personal Services and Allowances</u>		
International Staff	306,590	30.4
Local Staff	537,635	53.3
<u>Duty Travel</u>	36,482	3.6
<u>Supplies and Equipment</u>	116,350	11.5
<u>Common Services</u>	11,880	1.2
Total	1,008,937	100

PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

1978 BUDGET

FIELD ADVISORY SERVICES

	Regional Advisers	Advisers at Headquarters	Total	% of Total
<u>Personal Services and Allowances</u>				
International Staff	286,545	211,455	498,000	78.7
Local Staff	-	60,735	60,735	9.6
<u>Duty Travel</u>	27,696	36,119	63,815	10.1
<u>Supplies and Equipment</u>	-	7,650	7,650	1.2
<u>Common Services</u>	-	2,500	2,500	0.4
	<u>Total</u>	<u>314,241</u>	<u>318,459</u>	<u>100</u>
Percentage of Total	49.7	50.3		

PAN AMERICAN FOOT-AND-MOUTH DISEASE CENTER

Country	Tentative 1978 Contribution	
	Per Cent	Amount (US\$)
Argentina	7.40	197,667
Barbados	0.08	2,137
Bolivia	0.19	5,075
Brazil	7.40	197,667
Chile	1.35	36,061
Colombia	1.54	41,136
Costa Rica	0.19	5,075
Cuba	1.06	28,315
Dominican Republic	0.19	5,075
Ecuador	0.19	5,075
El Salvador	0.19	5,075
Guatemala	0.29	7,747
Haiti	0.19	5,075
Honduras	0.19	5,075
Jamaica	0.19	5,075
Mexico	8.27	220,906
Nicaragua	0.19	5,075
Panama	0.19	5,075
Paraguay	0.19	5,075
Peru	0.67	17,897
Trinidad and Tobago	0.19	5,075
United States of America	66.00	1,762,976
Uruguay	0.58	15,493
Venezuela	3.08	82,273
		<u>2,671,175</u>
<u>Other Member Governments</u>		
Bahamas	0.06	1,603
Canada	6.81	181,907
Guyana	0.19	5,075
Surinam	0.12	3,205
		<u>191,790</u>
<u>Participating Governments</u>		
France	0.19	5,075
Kingdom of the Netherlands	0.07	1,870
United Kingdom	0.19	5,075
		<u>12,020</u>

TOTAL: 2,874,985



PAN AMERICAN HEALTH ORGANIZATION

CD25/19 (Eng.)

ANNEX III

X INTER-AMERICAN MEETING, AT THE MINISTERIAL LEVEL, ON FOOT-AND-MOUTH DISEASE AND ZONNOSES CONTROL

WORLD HEALTH ORGANIZATION

WASHINGTON, D.C., U.S.A., 14-17 MARCH 1977

Provisional Agenda Item 6

RICAZ10/8 (Eng.)

31 January 1977

ORIGINAL: ENGLISH-SPANISH

PROGRAM AND BUDGET OF THE
PAN AMERICAN ZONNOSES CENTER FOR 1977
AND PROPOSED ESTIMATES FOR 1978

PROGRAM AND BUDGET OF THE PAN AMERICAN ZOOSES CENTER FOR 1977 AND ESTIMATES
FOR 1978

INTRODUCTION

The action carried out by the Pan American Zoonoses Center during its 20 years of activity has allowed it to collect and place at the service of the countries the greatest experience available on problems related to the main zoonoses in the Americas, both in their global and particular aspects. For this reason, the American countries and the international organizations have entrusted it, in compliance with the main purpose of its creation and functioning, with the increasing responsibility of collaborating, both at the national and multinational levels in the prevention and control of zoonoses.

The goal pursued is to overcome the obstacles and limitations stemming from these diseases which impede the development policies of the countries related to the planning and investments in the agricultural and livestock sectors, the production of the main foodstuffs, the problem of human malnutrition and the health of the human population.

The program of activities of the Center has been prepared taking into account the subjects and problems which interest either all countries of the Americas or a group of them; it includes therefore long-term activities as well as the satisfaction of immediate needs and requirements.

The needs of the countries are evaluated on the basis of requests for assistance received at the Center and the suggestions made directly to it or at national or multinational meetings, conferences and congresses; the field observations of the staff of the Organization or of the Center itself are also taken into account. In this way, the program of activities is continuously updated.

Experience has shown that the programming of the Center's activities should be flexible enough so that its capacity of action can be adjusted to the new problems which arise periodically.

In accordance with the responsibilities that have been assigned to it, the Pan American Zoonoses Center has established as its purpose to provide the countries with technical assistance for the control of the zoonoses. This purpose includes collaborating in the planning, execution and evaluation of programs and in the training of personnel; providing reference services for the diagnosis of zoonoses and the production and control of biologics; carrying out research; and supplying information services.

To attain this objective, the Center continued to carry out its activities during 1976 in the following fields:

a) Training program

The training of professional and technical personnel is one of the

most urgent and increasing needs of the countries and, consequently, one of the main activities of the Center. The Center has attained an outstanding reputation for the training it provides in the fields of brucellosis, tuberculosis, rabies, hydatidosis, leptospirosis, food hygiene, production and management of laboratory animals, planning in animal health, organization and administration of control programs, applied epidemiology, and biostatistics.

b) Technical advisory services

The implementation of control programs in the different countries has resulted in a considerably increased demand for technical assistance, including field and laboratory services. The main activities of this type of collaboration consist in advisory services on the planning, organization, execution and evaluation of control programs, the production of vaccines, sera and antigens, the performance of diagnostic tests and the quality testing of biologics.

c) Laboratory services

The Center has been assigned a leading role in the standardization of biologics for diagnostic purposes and for the prevention and control of zoonoses. To this end, it reproduces, maintains and distributes strains for the production of reference antigens and vaccines; it receives pathologic material and strains for reference diagnosis, as well as vaccines, sera and antigens for control testing. Furthermore, the Center acts as a regional reference laboratory for brucellosis, rabies, leptospirosis, tuberculosis, hydatidosis and food microbiology.

d) Technical information

The scarcity of available information on zoonoses in the Latin American countries is one of the most limiting factors to the furthering and development of programs related to these diseases. The high cost of publications together with the delay with which the technical information required to increase animal health services reaches the countries, have prompted the Center to distribute updated information on the different fields of technology and research related to animal health.

e) Research

The research projects of the Center are mainly of an applied nature and aimed at improving the methods of diagnosis, treatment and control (vaccines, sera, field procedures) and increasing the epidemiologic awareness of the main zoonoses in the different countries. The projects selected for implementation are of interest to all the countries of the Region or to a group of these and represent a joint effort to solve common problems, by both avoiding overlapping and saving money and effort.

The Scientific Advisory Committee, named by the Director of the Pan American Sanitary Bureau, periodically reviews the program of activities of the Center. The Committee is composed of well-known scientists and heads of control programs in the Americas and Europe; its work represents a safeguard

for the countries regarding the manner in which the Center fulfills its tasks and the criteria it follows for the investment of funds. The main function of the Scientific Advisory Committee is to submit recommendations to the Director of PASB on the most advisable way the Center can carry out its activities. It should be pointed out that the program of activities of the Center was last reviewed in November 1976.

It is a recognized fact that there is an ever increasing demand from the countries for the services rendered by the Center. Furthermore, when establishing the nature and extension of these services, the need to increase assistance to field activities and to expand the essential supporting services should be borne in mind. This means that the problems which at present limit the Center's capacity - both human and physical - to answer satisfactorily this demand should be solved in the near future.

In the course of the VIII and IX Inter-American Meetings on Foot-and-Mouth Disease and Zoonoses Control, reference was made to the facilities the Center requires to carry out its tasks; in this respect, we wish to enter into the record our special thanks to the Government of Argentina for the vigorous decisions it is adopting to solve this problem as soon as possible. More information on this matter will be provided in the course of this meeting.

Following are the main activities carried out by the Pan American Zoonoses Center during 1976. All of them have been permanently aimed at attaining the objectives mentioned above, which constitute the basis for its creation.

At the same time, we take pleasure in submitting the Program and Budget of the Pan American Zoonoses Center for the year 1977 and the estimates for 1978.

ACTIVITIES CARRIED OUT DURING 1976

I. PROGRAMS FOR THE PREVENTION AND CONTROL OF ZONOSSES

Brucellosis

During this period, the Center endeavored to provide all the collaboration requested by the countries in the field of technical assistance, especially in respect of brucellosis control programs at different stages of preparation and development.

With regard to this zoonosis, the Center collaborated in the preparation of the pertinent part of the projects submitted during 1976 to the IDB by Chile, Costa Rica, Paraguay and Uruguay. Likewise, advisory services were provided to Guatemala on diagnostic laboratory aspects on a national survey on the prevalence of this disease. The Center also provided similar services to the Dominican Republic on the laboratory and field aspects of the control program being implemented in this country.

The project of Paraguay, which was prepared in compliance with an agreement between the Government of that country and the Pan American Health Organization, demanded special effort. Close collaboration was maintained during 1976 with several Argentine agencies concerning the problem of human and animal brucellosis. A large number of requests for antigens, reagents, strains and reference sera were received from countries interested in obtaining them; all such requests were attended to, as shown in Tables I and II. Special attention continues to be given to the need of improving the diagnosis of brucellosis in man and, to this end, biologicals were also provided to several laboratories. Likewise, work was continued in collaboration with the Hospital Muffiz of Buenos Aires to determine the most sensitive and specific serologic tests for the diagnosis of human brucellosis especially in chronic cases and in cases classified as suspicious by the traditional tests. A total of 741 sera was processed using 7 different techniques.

A brucella strain, corresponding to B. abortus biotype 1, was isolated and typed for the first time in Paraguay from the material collected in that country by a specialist from the Center.

In view of the increasing importance of brucellosis control programs in several countries, it is evident that the Center will have to further its collaboration in this respect and to reinforce, in consequence, the personnel and other resources required to satisfy future demand.

Rabies

In spite of the fact that various countries have established programs of rabies control which in some areas are progressing well, the majority of these countries are not able to satisfy their requirements for vaccine if control at national level is to be achieved. Thus, during 1976, the action of the Center was directed towards the goal of ensuring that Member Countries are in a position to assure self-sufficiency of rabies vaccine. In this regard, a staff member of the Center visited vaccine production laboratories in Colombia, Ecuador and Peru and a great number of consultations made by letter or personally at the Center was answered.

The Pan American Health Organization signed an agreement with the Ministries of Health and Social Welfare and Agriculture and Livestock, of Venezuela, with the purpose of establishing a Regional Center for the Production of Antirabies Vaccine. Two consultants from the Center, one of them specialized in the production and control of vaccines and the other in the ecological aspects of zoonoses, are collaborating under the agreement, of great interest for the future programs of the Region. With regard to this agreement, it should be pointed out that the collaboration of the Center has made it possible for the National Institute of Hygiene of Venezuela to produce all the antirabies vaccine for human use required during 1976, as well as for the Government to comply with a request from the Argentine Republic for 1,000 human antirabies treatments. Venezuela was also able to donate 15,000 doses of canine vaccine to Grenada.

Active support was given to the planning of a program for the control of bovine rabies in Paraguay submitted to the IDB under a project which also includes brucellosis and tuberculosis.

Urban rabies in Argentina reached such proportions that an intensive and far-reaching control program was initiated; the Center has provided advisory services on the epidemiologic and laboratory aspects of this program. At the request of the authorities it has controlled all the lots of antirabies vaccines for human and animal use of imported as well as of domestic production. It also collaborated in obtaining from other countries vaccine for human use which was needed in Argentina.

Advice was given to the health authorities of Chile on the acquisition of equipment for the diagnosis of the disease. Likewise, the Center continued its cooperation in the program of bovine rabies and in the activities for the control of canine rabies in Rio Grande do Sul, Brazil, through a consultant assigned to that State.

Reference services on vaccine control, diagnosis and serology were provided to 11 countries. Various biologics were distributed to countries as shown in Tables I and II.

For next year and the future, it is anticipated that the Center will have to increase its direct assistance to countries to promote the planning and organization of programs of control and the establishment of programs of epidemiologic surveillance. The Center must encourage the control and/or eradication of vampire bats in areas where bovine rabies cases occur, through effective local and simultaneous vaccination, and the strengthening of national and regional laboratories concerned with diagnosis and the production and control of vaccines.

Hydatidosis and Immunology

The work of the Center in recent years to improve and standardize the techniques for the immunodiagnosis of hydatidosis in man has received ample recognition. Its well-deserved reputation in this field has been reflected not only in an increased demand for its collaboration from the American countries where the disease is predominant, but also in requests for special aid from 4 countries from Africa, 3 from Europe, and one from the Middle East.

Diagnostic services were provided to 29 hospitals in Argentina - from which 470 sera from patients were examined - as well as to hospitals of other countries. Several working agreements were established to carry out seroepidemiologic surveys of human populations in areas of high hydatidosis risk and, at the same time, to develop diagnostic laboratories in joint action with various Argentine provinces. The possibility of establishing similar agreements with the University of Concepción, Chile, and the Institute of Tropical Medicine "Daniel Carrión" in Peru is under consideration. Work planned for the forthcoming and following years includes the further dissemination of the techniques for the immunodiagnosis of hydatidosis, the training of personnel for this purpose and encouraging the establishment of new diagnostic laboratories which could also produce standardized antigens and sera, thus strengthening the existing laboratories of the Region.

It is anticipated that the Center will support the carrying out of seroepidemiological surveys in various countries, so as to better define the extent of the problem and thus be able to specify the measures to be adopted for control.

In this regard, it was necessary to reprint the publication on the immunodiagnosis of human hydatidosis (No. 7 of the Series of Scientific and Technical Monographs), to satisfy the numerous requests received.

With regard to programs of control of hydatidosis, the Center collaborated with those programs being carried out in Neuquén, Argentina, and Flores, Uruguay. In this latter country, the Center continued its collaborative study on possible economic losses caused by the disease in sheep. This study is carried out by the Honorary Commission against Hydatidosis. The Center had cooperated in the design of the study, and this year it collaborated in carrying out the infection of the experimental sheep.

The Center participated in a joint meeting of the health and agricultural authorities of Argentina on the control of hydatidosis in that country.

Next year, it is hoped to intensify the field aspects of the collaboration of the Center in the programs of Argentina and Uruguay, in the program of Peru in the Andean highlands, and in the program now being undertaken by Rio Grande do Sul in Brazil. The Center also intends to collaborate with countries in the establishment of pilot programs to observe under field conditions the usefulness of a new drug which offers favorable possibilities for the control of echinococcosis.

Tuberculosis

The efforts of the Center are directed towards providing countries with those services which permit them to control and eventually eradicate this disease. The Center assisted in the planning and evaluation of programs of control of bovine tuberculosis in Paraguay. It also assisted in the preparation of requests for financial assistance presented to the IDB by Chile, Costa Rica, Paraguay and Uruguay. Similarly, the Center continued providing assistance to the Argentine authorities in the fields of animal and human health. Through the assignment of a consultant of the Center stationed at Rio Grande do Sul,

the Center collaborated in the development of a program for tuberculosis and brucellosis control in important dairy areas of that State. Following meetings held between the authorities of Brazil and Uruguay, it was possible to reach an agreement through which dairy cattle from Uruguay were made available to Brazil to replace positive reactors in Rio Grande do Sul. These cattle were exchanged for vehicles of Brazilian manufacture, to be used in the animal health program in Uruguay.

With regard to laboratory aspects, the Center collaborated in establishing the basis for the production of PPD at the National Veterinary Biologics Production Laboratory (PRONABIVE), in Mexico. On the other hand, the Center assisted various countries in the control of BCG vaccine, in the typing of mycobacteria, in the industrial preparation of PPD and in the provision of reference biologics.

The Center should complete its personnel list to provide the assistance which countries require in regard to tuberculosis control programs. As in the case of brucellosis, tuberculosis control is being included as a constant component in the animal health programs of various countries, and the Center anticipates an increasing number of requests for assistance for such programs.

Food Microbiology

The Center has continued its efforts to standardize the analytic techniques used by official laboratories of Latin American countries in food microbiology. These efforts were focused on specific technical assistance and individual and group training, the provision of strains of microorganisms and of other biologics to different laboratories, as well as on various technical advisory services. The Center continued its close collaboration with the Research Center for the Dairy Industry (CITIL), a unit of the National Institute of Industrial Technology (INTI) of Argentina, with whom it carried out joint studies on the microbiologic composition of dairy products for the setting up of standards and techniques applicable to countries in the Region. The Center also collaborated with the Ministry of Public Health Works of Argentina providing specialized information on the control of contamination of drinking water. Collaborative studies with the health authorities were also carried out in Argentina in relation to hospital associated infections at a major hospital in Buenos Aires.

The Center was represented at the WHO Expert Committee on Microbiological Aspects of Food Hygiene. At this meeting recommendations of general importance were made.

The training provided by the Center in this field was one of the most outstanding activities during 1976. The Center participated in the organization of various intensive courses directed to professionals in the field. Thus, for example, the Center participated in a course held at the School of Public Health of Medellín, Colombia. At the Center itself, a course was held for 26 professionals of Argentina, the majority of whom hold posts of responsibility in the control of food in different laboratories. The course was concerned with updating material and information and with reviewing techniques and criteria.

A review of the work of the past year indicates once more that there is a need to increase the collaboration of the Center in a subject as important as food hygiene. Thus, the program of activities planned for the future

anticipates an increasing demand and a need for the Center to provide the corresponding services.

Leptospirosis

In this field, the Center has been awarding preferential attention to the improvement of diagnostic procedures for leptospirosis in the laboratories concerned. In addition, the Center has provided a great deal of effort in collaborative studies being carried out in 6 countries; it has received 1,083 sera of animal and human origin. In addition, in its role of reference laboratory, the Center has identified and classified leptospira sent for this purpose. A total of 7 countries requested and received leptospiral strains and sera.

Other activities

In compliance with a resolution of RICAZ, the Center continued its work on the Census of Diagnostic Laboratories in Animal Health in the Americas. The second stage of this survey was carried out, and the data obtained are now being analyzed. During the meeting to be held in Washington from 14 to 17 March 1977, a document will be issued which summarizes the results obtained.

An interesting aspect of the help which can be given regarding the coordination of activities related to control of zoonoses can be seen in the successful meetings held by the authorities of Brazil and Uruguay. These had as their objective the establishment of a cooperative effort in the common border area in field activities and the improved surveillance of zoonoses and foot-and-mouth disease. At the end of 1976 the work towards the eventual signing of a formal agreement was well advanced. The Center collaborated in all stages of these activities through the services of its consultant stationed at Rio Grande do Sul.

With regard to this type of collaboration, it should be noted that the member countries of the Andean Group have presented to the IDB a project of technical cooperation in animal health and veterinary public health. The Center began its collaboration in this field preparing various programs for training courses which will be held in the countries of the Andean Group.

The service for Epidemiological Rabies and Encephalitis Surveillance in the Americas continued normally, as did the preparation of annual epidemiological bulletins on brucellosis, tuberculosis, leptospirosis, hydatidosis and food microbiology. The Center attended requests for collaborative services in an outbreak of trichinosis in the Argentine Patagonia, and assisted in the investigation of an outbreak of rabies in the metropolitan area of Buenos Aires. In addition, the Center collaborated in the analysis of studies carried out regarding an epidemic of Q Fever in the staff of an important packing plant in Montevideo, Uruguay.

II. LABORATORY SERVICES AND PROVISION OF BIOLOGICS

The Center continued to exercise a guiding role in the standardization of biological products used for the diagnosis and control of zoonoses. Regarding the most important aspects of the collaboration provided, mention should be made of the fact that 24 countries, including 4 from Africa, 3 from Europe and 1 from the Middle East requested and received reference services in the diagnosis of brucellosis, rabies, tuberculosis and other zoonoses; in addition, similar services were provided in quality control of vaccines against brucellosis and rabies. The Center undertook identification of a large number of strains of brucella, leptospira, mycobacteria, salmonella and other microorganisms. A total of over 6,000 sera were processed by the Center. These sera were concerned with research studies being carried out by several countries to whom the Center provides this laboratory support (see Tables I and II).

Two important projects involving regional laboratories deserved special attention from the Center during the year. One of these is the National Biologics Production Laboratory of Mexico (PRONABIVE), destined to serve the countries of Central America and Panama in accordance with the regional project recently approved. The Center assigned a consultant on permanent station in Mexico, to provide direct support to this activity.

Another consultant assigned by the Center to Venezuela is actively collaborating in the establishment of a Regional Center for the Production of Rabies Vaccine. This unit is beginning its activities in compliance with the agreement between the Government of Venezuela and the Pan American Health Organization.

Efforts of the Center continued for the improvement of diagnostic services for hydatidosis, especially in hospitals of Argentina, Chile, Peru and Uruguay. A total of 395 brain specimens were received for rabies laboratory diagnosis from two antirabies centers of Buenos Aires, Argentina.

In view of the fact that in several countries programs of zoonoses control are being developed, it must be anticipated that next year, and in subsequent years, the Center will have to increase its support in the formation and development of national service organization structures of the animal health and public health laboratories, so that these might be in a position to provide the extra services required.

III. TRAINING

The training of veterinarians, physicians and other professionals, as well as technical staff, continues to be one of the most important functions of the Center. During 1976, a total of 43 professionals from 15 countries were received at the Center. This number includes students at the VI Course of Planning in Animal Health. One of the candidates accepted by the Center for training in immunodiagnostic techniques for hydatidosis was from Iran. The subjects studied by fellows concerned the different zoonoses in which the Center is presently working, and details of this activity are shown in Tables III and IV, with indications of subject of study and country of origin for the period 1968 to date.

As in previous years, the Center collaborated in post-graduate training. Staff of the Center assisted at a total of 26 such training events which included national courses, seminars, congresses and symposia. This kind of training activity will continue to merit special attention in the future, permitting the Center to comply with the recommendations made by countries of the Americas on various occasions. It is universally understood that post graduate training of human resources is essential for effective programs of control of zoonoses.

IV. VI COURSE - PLANNING IN ANIMAL HEALTH

Recognition has been given to the role of the Pan American Zoonoses Center in ensuring that countries now have at their disposal an appreciable number of veterinarians trained in planning in animal health.

During 1976, a total of 20 professionals belonging to 12 countries undertook the sixth annual course. Thus, at the end of 6 years, a total of 110 fellows from 19 countries of the Americas have been trained in this modern discipline (see Table V). The majority of the candidates who have finished such training are presently working in the planning units created within the animal health services during recent years, at both national and state levels. In some cases, these professionals have posts of high responsibility in the control programs. As has been pointed out at previous meetings, this course had its origin in the recognition of the need to train veterinarians in the management of a series of disciplines not normally included in regular study programs at faculties of veterinary medicine.

It will be necessary in the future to continue the presentation of such courses and to intensify the collaboration with countries to promote the spread of this type of training within the services of veterinary public health and animal health.

V. TECHNICAL INFORMATION AND LIBRARY SERVICES

Within the basic framework of providing to Latin America, technical information concerning zoonoses, microbiology and animal disease, the Center continued to publish the Zoonoses Bulletin, Technical Notes, Monographs, reports, manuals and technical articles. The purpose of these publications is to maintain professionals up to date in matters regarding diagnosis, epidemiological surveillance and planning of zoonoses control programs.

These publications were distributed to officers of the public health and animal health services, as well as to universities, laboratories and research units in related fields.

The library, which is of a highly specialized nature, has a collection of 6,000 books. It receives over 500 scientific reviews, and prepares bibliographical summaries on specific topics, which are then provided on request to interested individuals. The library also provides photocopies of scientific and technical articles which are required by official and private

institutions when the original press copy cannot be obtained in the countries themselves.

The library also has audiovisual material which is available to requesting agencies on a loan basis, for use in their own technical improvement program of public health education.

The evident need for better and more scientific and technical information, together with the limitation of many biomedical libraries of Latin America, has emphasized the need for the Center to expand this service even further.

VI. RESEARCH

The Center's research projects are principally of an applied nature. They have as their objectives the improvement in diagnosis and in production and control of biologics, the better definition of the epidemiology of the zoonoses and the evaluation of more effective control measures.

The research program of the Center is reviewed every 2 years by a Scientific Advisory Committee designated by the Director of the Pan American Health Organization. The Committee is made up of outstanding scientists from America and Europe, who present their recommendations for the more effective work of the Center. The meeting of this group during 1976 and the work accomplished once more constitute a guarantee for the countries, of the objectives, priorities and quality of the Center's research program.

In view of the fact that at this meeting a member of the Scientific Advisory Committee will be presenting a special report on the research program of the Center, mention will only be made here of a few of the more outstanding points of the program already carried out or under way.

The Center has developed a rabies vaccine of tissue culture origin for animal use. In this regard, the available technology and tests undertaken so far have shown that the production of such a vaccine is simple, and that the cost of production will be reasonable. This vaccine has protected, during the first 12 months of its application, 100% of the challenged dogs. Other tests have been designed to verify if the duration of the immunity reaches 2 or perhaps 3 years. This promising vaccine, developed at this time only on a laboratory scale, has shown itself to be stable for more than one month at 37°C both in liquid as well as in lyophilized form.

A study has been terminated on the duration of immunity in cattle using suckling mouse brain vaccine with aluminum hydroxide in one test and oil adjuvant in another. The cattle were challenged with rabies virus and it was shown that in both cases the vaccine had provided effective protection two years after vaccination. This demonstration is of great practical significance, particularly since it will permit laboratories producing SMB vaccine for human and canine use to pass to production of this vaccine for use in cattle. An important research activity in the field of brucellosis is concerned with the development of a potency test to measure the immunity conferred by vaccines against brucellosis.

To date, a total of 10 commercial strain 19 vaccines have been submitted to strict control tests, with satisfactory results in 9 of them.

In repeated laboratory tests it has been found that Rev. 1 Brucella melitensis vaccine is an important immunogen not only against challenge with B. melitensis but also against B. abortus and B. suis. These results were confirmed by work at the Center in trials in goats in which it was shown that improved protection was obtained using very small doses of this vaccine, as compared to large doses required by other vaccines.

The Center has prepared various lots of this vaccine for the pilot program of Peru and is attempting to encourage similar research in other regions where B. melitensis infection constitutes a serious problem. At the present time, consideration is being given to testing this vaccine in large animals.

The Center is evaluating the serological tests which are currently being used for the diagnosis of human brucellosis and hopefully it will be possible to advise on a more precise basis, on subjects of this nature and interest. This will also make it possible to assist in the standardization of the techniques and criteria most recommended. In addition, the Center continues the study of the factors which can affect the storage life of lyophilized vaccines prepared with different stabilizers.

Results obtained have shown notable differences in the maintenance of potency, according to the stabilizer used and the procedures for lyophilization. It is hoped that the results of these studies may contribute to improve production and storage techniques and thus safeguard the maintenance of the immunogenic capacity of the vaccines up to the moment of their administration.

The Center continued its studies on the diagnosis and isolation of leptospirosis with the purpose of obtaining a better understanding of the epidemiological importance of the strains most widely spread in the Americas.

A project being carried out at this time is concerned with a new technique which makes it possible to distinguish with less difficulty pathogenic from saprophytic leptospira. Another project is concerned with the elucidation of the role of wildlife in the transmission of this disease. It was shown that a species of armadillo (Chaetophractus villosus), which is common in Argentina and other countries, is an important reservoir host for numerous pathogenic leptospira. In addition, work is proceeding to see if envelope antigens of the leptospira offer possibilities for the immunization of man and animals.

With regard to tuberculosis, it should be mentioned that several projects were begun. These are concerned with practical aspects of tuberculosis control and eradication. Studies are being made on the different factors which are concerned in the response to the tuberculin test. These include studies of possible interference in the interpretation of the test by viral or bacterial infection or by immunizing agents using inactivated or modified virus, as well as by bacteria. The trials concerned are being carried out initially in guinea pigs and cattle. Results obtained in infected cattle have been compared with results obtained using different PPD produced with mycobacteria of bovine, human and avian origin.

It was shown that there was better specificity in cattle when PPD of M. bovis origin was used. This is of special importance for eradication programs.

With regard to hydatidosis, important studies regarding the specificity of arc 5 have continued. Up till now, arc 5 has been considered to be specific for E. granulosus. It has been shown that arc 5 is also present in human cases with E. multilocularis as well as in the liquid of cysts produced by T. hydatigena. These advances are of special importance in decisions for surgery in man. It has been possible to separate antigens specific for E. echinococcus and T. hydatigena and this opens up new possibilities for further improvement of the immunodiagnostic techniques.

In addition, the Center has begun research of considerable interest for the control of echinococcosis. At this time, a trial of very promising new drugs for use in dogs, is under way. Through trials at the experimental field station of the Center confirmation was obtained of studies carried out in New Zealand. It was shown that this drug was most effective against T. echinococcus in infected dogs. Studies are now proceeding to see if it also possesses any ovicidal effect. Another project, cooperatively undertaken with Uruguay, is concerned with the estimate of economic losses caused by hydatidosis in sheep.

In the field of food microbiology research aimed at establishing microbiologic criteria for the control of cheeses is being continued. It has been shown that the number of coliform and Staphylococcus aureus organisms varies considerably according to the kind of cheese - semihard or soft. In addition, research continues into the survival of salmonella in sewage water after purification in plants in the city of Buenos Aires. The results of these studies have permitted the application of several measures for water quality improvement.

Among the projects related to pathology, mention should be made of those concerning anatomic, histological, and hematological characteristics of the armadillo. These animals have recently been used as an important and valuable experimental animal model for research. It has been shown recently that this is the only animal species in which human leprosy can be reproduced. For this reason, and because the armadillo offers possibilities of significant interest in the field of mycobacteria, the Center has established a colony of armadillos and is presently studying the care and management aspects concerned, under laboratory animal conditions. At this time, an atlas on the histology of the normal animal is being prepared. This information will permit comparisons to be made when histopathological studies are carried out.

In the same way, and as a result of the research carried out, a manual on the pathology of laboratory animals has been prepared and is now ready for publication.

TABLE I
LABORATORY SERVICES TO COUNTRIES

Countries	Control of Biologics				Strains Received for Typing					Sera Received			
	Rabies Vaccine	BCG Vaccine	Bruc. Vaccine	Bruc. Antigen	Bruc.	Lepto.	Mycobact.	Salmonella & others	Cysticercosis	Bruc.	Lepto.	Rabies	Hyd.
Area III		x											
Argentina	x	x			x		x			x	x	x	x
Barbados										x	x		
Bolivia	x							x		x			
Brazil	x					x	x						
Colombia	x					x	x	x				x	
Curacao												x	
Chile	x	x											
Dominican Rep.			x										
Ecuador	x					x						x	
France	x												
Guatemala	x												
Nicaragua	x											x	
Panama	x												
Paraguay	x		x		x		x					x	x
Peru				x									
Uruguay	x	x						x					
U.S.A.	x												
Venezuela	x		x	x	x								
Others													x

TABLE II

PROVISION OF REFERENCE BIOLOGICS

Countries	BRUCELLOSIS			LEPTOSPIROSIS		RABIES		TUBERCULOSIS	Enterobact. Mycobact. Anthrax & other Strains	HYDATIDOSIS
	Antigen	Strains	Sera	Strains	Sera	Conjug.	Vaccines, Strains, Sera	Reference Tuberculin		Antigen
Argentina	x	x	x	x		x	x	x	x	x
Bolivia						x	x			
Brazil	x	x		x	x			x		
Chile	x						x	x		
Colombia	x	x	x			x	x			
Dominican Republic				x	x	x	x	x		
Ecuador	x			x	x	x		x		
Guatemala						x				
Panama						x				
Paraguay	x							x		
Peru	x	x	x			x				x
Surinam				x	x	x	x			
Trinidad/Tobago						x	x			
Uruguay				x	x				x	x
Venezuela	x	x				x	x			
Others										x

TABLE III
INDIVIDUAL TRAINING OF FELLOWS, BY COUNTRY

1968 - 1976

COUNTRY	1968	1969	1970	1971	1972	1973	1974	1975	1976	Total
<u>South America</u>										
Argentina	2	6	19	18	10	9	12	14	9	99
Bolivia	-	1	2	1	-	1	1	1	2	9
Brazil	2	4	4	4	8	1	3	4	1	31
Chile	-	1	-	2	1	-	3	2	-	9
Colombia	1	1	4	4	4	2	1	2	-	19
Ecuador	-	2	-	2	-	2	2	-	-	8
Peru	-	-	-	1	3	2	1	1	1	9
Paraguay	-	1	1	-	1	1	-	-	2	6
Uruguay	-	-	-	1	7	-	2	2	-	13
Venezuela	-	1	4	2	4	-	-	2	4	17
<u>Panama, Central America, Mexico</u>										
Panama	-	1	-	-	1	-	-	1	-	3
Costa Rica	-	-	2	-	-	-	-	-	-	2
El Salvador	-	1	-	-	-	-	-	-	-	1
Guatemala	-	1	-	1	-	-	1	1	-	4
Honduras	1	-	-	-	-	1	-	-	2	4
Mexico	1	1	1	2	-	4	2	4	1	16
Nicaragua	-	-	-	1	-	-	-	1	-	2
<u>Caribbean Area</u>										
Barbados	-	-	-	-	1	1	-	-	-	2
Belize	-	-	-	-	-	-	-	1	-	1
Cuba	-	-	1	1	-	3	1	-	-	6
Curacao	-	-	-	-	-	-	1	-	-	1
Dominican Republic	-	-	-	1	1	-	2	-	-	4
Grenada	-	-	-	-	-	-	1	-	-	1
Haiti	-	-	-	-	-	1	2	-	-	3
Jamaica	-	-	-	-	-	1	-	-	-	1
Surinam	-	-	-	-	1	-	-	-	-	1
Trinidad & Tobago	-	-	-	-	-	2	2	-	-	4
<u>Others</u>										
Iran	-	-	-	-	-	-	-	-	1	1
Philippines	-	-	-	-	-	1	-	-	-	1
U.S.A.	-	-	-	-	-	1	-	-	-	1
Total	7	21	38	41	42	34	37	36	23	279

TABLE IV

ALL INDIVIDUAL TRAINING OPPORTUNITIES UNDERTAKEN BY CANDIDATES (*) AT THE PAN AMERICAN ZOOSES CENTER, BY YEAR
1968 - 1976

Subject	1968	1969	1970	1971	1972	1973	1974	1975	1976	Total
Rabies	6	17	15	14	10	10	7	7	5	91
Brucellosis	4	7	2	7	7	11	9	8	4	59
Hydatidosis	-	2	4	3	6	4	6	6	6	37
Leptospirosis	4	5	1	1	3	2	2	7	1	26
Laboratory Animals	2	5	10	5	3	2	-	1	3	31
Food Microbiology	-	5	6	10	5	3	7	6	1	43
Tuberculosis	-	4	2	2	-	4	4	3	1	20
Zoonoses (various)	-	-	-	1	3	2	2	1	1	10
Pathology	-	-	-	-	1	-	-	1	-	2
Ecology	-	-	-	-	-	-	1	-	-	1
Miscellaneous	-	-	-	-	3	-	-	2	1	6
Total	16	45	40	43	41	38	38	42	23	326

(*) Undertaken by 279 fellows

TABLE V
COURSES ON PLANNING IN ANIMAL HEALTH
1971 - 1976

Year	Number of participants	Number of countries
1971	13	9
1972	18	9
1973	26	14
1974	18	11
1975	15	9
1976	20	12
Total	110	

Note: The total of 110 students are from 19 countries (Argentina, Brazil, Bolivia, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela).

BUDGET OF THE PAN AMERICAN ZONOSSES CENTER
FOR 1977

ESTIMATES FOR 1978

BUDGET OF THE PAN AMERICAN ZOOSES CENTER FOR 1977
AND ESTIMATES FOR 1978

The year of 1977 corresponds to the sixth yearly stage of the administration of the Pan American Zoonoses Center as a Regional Project under the support of the United Nations Development Program.

The Government of Argentina participates with its contribution in the purposes that prompted the establishment of this United Nations project.

The UNDP contribution was approved in January 1972, and as regional project, the Center will now be able to increase the technical assistance it provides to the American countries in support of their zoonoses control and/or their eradication programs.

SOURCE OF FUNDS

Under the Regional Project, the funds allocated for financing the activities of the Pan American Zoonoses Center during the period 1972-1978 will come from the following sources:

- a. The United Nations Development Program (UNDP) - 1972-1977;
- b. An annual contribution from the Government of Argentina;
- c. Funds from the Regular Budget of the Pan American Health Organization (PAHO) - including the contributions of the Ministries of Agriculture as per Resolution II of RICAZ III, 15 April 1970 ;
- d. Funds from the Regular Budget of the World Health Organization (WHO).

Tables 1 and 1A show the budgetary projection for the years 1977 through 1978.

TABLE 1

PAN AMERICAN ZOONOSES CENTER
 BUDGETARY PROJECTIONS FOR THE YEARS 1977 THROUGH 1978
 (in US dollars)

	1977	1978
	\$	\$
Contributions from the United Nations Development Program (UNDP)	60,000	-
Contributions from the Government of Argentina*	530,395	645,932
Funds from Regular Budget of the Pan American Health Organization **	673,125	745,225
Funds from the Regular Budget of the World Health Organization	<u>186,965</u>	<u>205,665</u>
	<u>1,450,485</u>	<u>1,596,822</u>

* The US dollar figure is subject to change since the funds are received in local currency and converted to US dollars, using the exchange rate at the time of receipt.

** In the funds of the PAHO Regular Budget, there are included the corresponding contributions of the Ministries of Agriculture, in the amounts of \$ 531,468 (1977) and \$ 584,615 (1978). These amounts, included in the PAHO Regular Budget and approved by the Directing Council of PAHO (or the Pan American Sanitary Conference) form an integral part of the quota assessment of each Member Government.

For the information of those Member Governments who decide to allocate to the Ministry of Agriculture a portion of the quota for support of the Pan American Zoonoses Center, there is a schedule in Table 1A, showing the amount by country.

TABLE 1A

PROPORTION OF CONTRIBUTIONS OF MEMBER GOVERNMENTS OF PAHO
PROJECTED FOR FINANCING THE EXPANDED PROGRAM OF SERVICES
OF THE PAN AMERICAN ZOONOSES CENTER

Country	%	\$ 1978
Argentina	7.40	40,195
Barbados	0.08	435
Bolivia	0.19	1,032
Brazil	7.40	40,195
Chile	1.35	7,333
Colombia	1.54	8,365
Costa Rica	0.19	1,032
Cuba	1.06	5,758
Dominican Republic	0.19	1,032
Ecuador	0.19	1,032
El Salvador	0.19	1,032
Guatemala	0.29	1,575
Haiti	0.19	1,032
Honduras	0.19	1,032
Jamaica	0.19	1,032
Mexico	8.27	44,920
Nicaragua	0.19	1,032
Panama	0.19	1,032
Paraguay	0.19	1,032
Peru	0.67	3,639
Trinidad & Tobago	0.19	1,032
United States of America	66.00	358,492
Uruguay	0.58	3,150
Venezuela	3.08	16,730
	<u>100.00</u>	<u>543,171</u>
<u>Other Member and</u>		
<u>Participating Governments</u>		
Bahamas	0.06	325
Canada	6.81	36,991
France	0.19	1,032
Guyana	0.19	1,032
Kingdom of the Netherlands	0.07	380
Surinam	0.12	652
United Kingdom	0.19	1,032
		<u>41,444</u>
TOTAL		<u><u>584,615</u></u>

PAN AMERICAN ZOOSES CENTER
BREAKDOWN OF THE BUDGET FOR 1977

	Office of Director	Training and Technical Information	Technical Assistance		Research	Adminis- tration	Meet- ings	Local Costs	Total	% of Total
			Field Services for Zoonoses Control	Laboratory Services						
Salaries & Allowances	90,353	118,483	242,342	360,264	236,350	142,272	-	-	1,190,064	82.1
Short-term Consultants	-	7,662	7,700	13,883	9,255	-	-	-	38,500	2.6
Duty Travel	5,167	5,598	7,751	14,468	9,645	431	-	-	43,060	3.0
Fellowships	-	28,300	-	-	-	-	-	-	28,300	1.9
Supplies & Equipment	7,590	3,795	15,178	20,490	13,660	2,530	-	-	63,243	4.4
Common Services	5,067	7,860	12,994	19,218	12,812	7,017	-	-	64,968	4.5
Contractual Services	975	1,512	2,500	3,698	2,465	1,350	-	-	12,500	0.9
Local Costs	-	-	-	-	-	-	-	4,900	4,900	0.3
Publications	-	4,950	-	-	-	-	-	-	4,950	0.3
TOTAL	109,152	178,160	288,465	720,486	432,021	284,187	153,600	4,900	1,450,485	
Percentage of Total	7.5	12.3	19.9	49.7	29.8	19.6	10.6	0.3		100

PAN AMERICAN ZOOSES CENTER BUDGET
1 JANUARY THROUGH 31 DECEMBER 1977

I. OFFICE OF THE DIRECTOR & LIBRARY	<u>109,152</u>
a) Personnel: Salary & Allowances	90,353
Professional Staff (1) Director, P.5	
Local Staff (7)	
b) Duty travel	5,167
c) Supplies & equipment	7,590
d) Common services	5,067
e) Contractual services	975
II. TRAINING & TECHNICAL INFORMATION ACTIVITIES	<u>178,160</u>
a) Personnel: Salary & Allowances	118,483
Professional Staff (3) Chief of Training, P.4 Editor/Translator, P.2 Audiovisual Specialist, P.1	
Local Staff (6)	
b) Short-term consultants	7,662
c) Duty travel	5,598
d) Fellowships	28,300
e) Supplies & Equipment	3,795
f) Common services	7,860
g) Contractual Services	1,512
h) Publications	4,950

1977 BUDGET (cont.)

III. FIELD SERVICES FOR ZONOSSES
CONTROL

288,465

a) Personnel: Salary & Allowances	242,342
Professional staff (4)	
Chief of Technical Services, P.5	
Control Programs Adviser, P.4	
Epidemiologist, P.4	
Biostatistician, P.4	
Local Personnel (17)	
b) Short-term consultants	7,700
c) Duty travel	7,751
d) Supplies & equipment	15,178
e) Common services	12,994
f) Contractual Services	2,500

IV. LABORATORY SERVICES

432,021

a) Personnel: Salary & Allowances	360,264
Professional Staff (8)	
Local Staff (21)	
b) Short-term Consultants	13,883
c) Duty travel	14,468
d) Supplies & equipment	20,490
e) Common services	19,218
f) Contractual services	3,698

V. RESEARCH SERVICES

284,187

a) Personnel: Salary & Allowances	236,350
Professional Staff (5)	
Local Staff (10)	

1977 BUDGET (cont.)

b) Short-term Consultants	9,255
c) Duty travel	9,645
d) Supplies & Equipment	13,660
e) Common services	12,812
f) Contractual services	2,465
VI. ADMINISTRATIVE SERVICES	<u>153,600</u>
a) Personnel: Salary & Allowances	142,272
Professional Staff (1) Administrative Officer, P.3 Local Staff (21)	
b) Duty travel	431
c) Supplies & Equipment	2,530
d) Common services	7,017
e) Contractual services	1,350
VII. MEETINGS	<u>-</u>
Scientific Advisory Committee Travel - Per Diem -	
VIII. LOCAL COSTS	<u>4,900</u>
Local operating costs	<u>4,900</u>
TOTAL	<u><u>1,450,485</u></u>

PAN AMERICAN ZOOSES CENTER

BUDGET FOR 1977

TECHNICAL ADVISORY SERVICES

	Field Services	%	Labora- tory Services	%	Total
Salaries & Allowances					
International Staff	170,550	59.1	277,775	64.3	448,325
Local Staff	79,492	27.6	96,372	22.3	175,864
Duty travel	7,751	2.7	14,468	3.4	22,219
Supplies & equipment	15,178	5.3	20,490	4.7	35,668
Common services	12,994	4.5	19,218	4.5	32,212
Contractual services	2,500	0.8	3,698	0.8	6,198
TOTAL	288,465	100.0	432,021	100.0	720,486
Percentage of Total	40.0		60.0		100.0

PAN AMERICAN ZONOSSES CENTER

1977 BUDGET

TRAINING AND TECHNICAL INFORMATION

	National Courses*	International Courses & Seminars	Individual Training	Publications	Total	Percentage of Total
Salaries & Allowances						
International Staff	39,044	35,947	18,922	4,384	98,297	55.2
Local Staff	10,053	9,134	4,762	3,899	27,848	15.6
Duty Travel	1,932	2,524	1,142	-	5,598	3.2
Fellowships	10,782	10,584	6,934	-	28,300	15.9
Supplies & Equipment	888	774	110	2,023	3,795	2.1
Common Services	1,721	1,383	353	4,403	7,860	4.4
Contractual Services	610	532	204	166	1,512	0.8
Publications	2,062	2,062	826	-	4,950	2.8
Total	67,092	62,940	33,253	14,875	178,160	
Percentage of Total	37.7	35.3	18.7	8.3		100

* To be held in the countries with the assistance of the Center.

PAN AMERICAN ZONOSSES CENTER

1977 BUDGET

RESEARCH PROJECTS

	Epidemiological Research	Improvement of Diagnosis	Improvement of Vaccines	Basic Research	Total	Percentage of Total
Salaries & Allowances						
International Staff	55,370	54,825	45,748	25,598	181,541	63.9
Local Staff	18,899	18,771	16,144	10,250	64,064	22.5
Duty Travel	3,368	3,182	2,122	973	9,645	3.4
Supplies & Equipment	4,165	4,113	3,442	1,940	13,660	4.8
Common Services	3,512	4,022	3,664	1,614	12,812	4.5
Contractual Services	764	758	660	283	2,465	0.9
Total	86,078	85,671	71,780	40,658	284,187	
Percentage of Total	30.3	30.1	25.3	14.3		100

PAN AMERICAN ZONOSSES CENTER

BREAKDOWN OF THE BUDGET FOR 1978

	Office of Director	Training & Technical Information	Technical Assistance		Research	Adminis- tration	Meet- ings	Local Costs	Total	% of Total
			Field Services for Zoono- ses Control	Labora- tory Services						
Salaries & Allowances	99,865	131,118	266,633	368,145	242,665	176,739	-	-	1,285,165	80.5
Short-term Consultants	-	8,712	8,976	15,787	10,525	-	-	-	44,000	2.8
Duty Travel	5,309	5,751	7,963	14,865	9,910	442	-	-	44,240	2.8
Fellowships	-	22,600	-	-	-	-	-	-	22,600	1.4
Supplies & Equipment	8,803	4,402	17,607	23,769	15,846	2,934	-	-	73,361	4.6
Common Services	6,693	9,873	17,068	23,694	15,796	10,542	-	-	83,666	5.2
Contractual Services	1,000	1,475	2,550	3,540	2,360	1,575	-	-	12,500	0.8
Meetings	-	-	-	-	-	-	26,340	-	26,340	1.6
Publications	-	4,950	-	-	-	-	-	-	4,950	0.3
TOTAL	121,670	188,881	320,797	449,800	297,102	192,232	26,340	-	1,596,822	
			770,597							
Percentage of Total	7.6	11.8	20.1	28.2	18.6	12.0	1.7			100
			48.3							

PAN AMERICAN ZONNOSES CENTER

BUDGET

1 JANUARY THROUGH 31 DECEMBER 1978

I. OFFICE OF THE DIRECTOR & LIBRARY	<u>121,670</u>
a) Personnel: Salary & Allowances	99,865
Professional Staff (1) Director, P.5	
Local Staff (7)	
b) Duty travel	5,309
c) Supplies & equipment	8,803
d) Common Services	6,693
e) Contractual Services	1,000
II. TRAINING & TECHNICAL INFORMATION	<u>188,881</u>
a) Personnel: Salary & Allowances	131,118
Professional Staff (3) Chief of Training, P.4 Editor/Translator, P.2 Audiovisuals Specialist, Pl	
Local Staff (6)	
b) Short-term Consultants	8,712
c) Duty travel	5,751
d) Fellowships	22,600
e) Supplies & equipment	4,402
f) Common Services	9,873
g) Contractual Services	1,475
h) Publications	4,950
III. FIELD SERVICES FOR ZONNOSES CONTROL	<u>320,797</u>
a) Personnel: Salary & Allowances	266,633

1978 BUDGET (cont.)

Professional Staff (4)
Chief of Technical Services, P.5
Control Programs Adviser, P.4
Epidemiologist, P.4
Biostatistician, P.4

Local Staff (17)

b) Short-term Consultants	8,976
c) Duty travel	7,963
d) Supplies & equipment	17,607
e) Common services	17,068
f) Contractual services	2,550

IV. LABORATORY SERVICES 449,800

a) Personnel: Salary & Allowances	368,145
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Professional Staff (7)

Local Staff (21)

b) Short-term Consultants	15,787
c) Duty travel	14,865
d) Supplies & equipment	23,769
e) Common services	23,694
f) Contractual services	3,540

V. RESEARCH SERVICES 297,102

a) Personnel: Salary & Allowances	242,665
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Professional Staff (5)

Local Staff (10)

b) Short-term Consultants	10,525
c) Duty travel	9,910
d) Supplies & equipment	15,846
e) Common Services	15,796
f) Contractual Services	2,360

PAN AMERICAN ZONOSSES CENTER

BUDGET FOR 1978

TECHNICAL ADVISORY SERVICES

	Field Services	%	Labora- tory Services	%	Total
Salaries & Allowances					
International Staff	179,496	56.0	269,890	60.0	449,386
Local Staff	96,113	30.0	114,042	25.4	210,155
Duty Travel	7,963	2.5	14,865	3.3	22,828
Supplies & Equipment	17,607	5.5	23,769	5.3	41,376
Common Services	17,068	5.3	23,694	5.3	40,762
Contractual Services	2,550	0.7	3,540	0.7	6,090
TOTAL	320,797	100.0	449,800	100.0	770,597
Percentage of Total	41.6		58.4		100.0

PAN AMERICAN ZONOSES CENTER

1978 BUDGET

TRAINING AND TECHNICAL INFORMATION

	National Courses*	International Courses & Seminars	Individual Training	Publications Publications	Total Total	Percentage Total
Salaries & Allowances						
International Staff	41,248	37,977	19,991	4,631	103,847	55.0
Local Staff	12,990	11,802	6,153	5,038	35,983	19.1
Duty Travel	1,985	2,593	1,173	-	5,751	3.0
Fellowships	8,611	8,452	5,537	-	22,600	12.0
Supplies & Equipment	1,031	898	127	2,346	4,402	2.3
Common Services	2,162	1,738	443	5,530	9,873	5.2
Contractual Services	595	519	199	162	1,475	0.8
Publications	2,062	2,062	826	-	4,950	2.6
TOTAL	70,684	66,041	34,449	17,707	188,881	
Percentage of Total	37.4	35.0	18.2	9.4		100.0

* To be held in the countries with the assistance of the Center

PAN AMERICAN ZONOSSES CENTER

1978 BUDGET

RESEARCH PROJECTS

	Epidemiological Research	Improvement of Diagnosis	Improvement of Vaccines	Basic Research	Total	Percentage of Total
Salaries & Allowances						
International Staff	53,770	53,241	44,426	24,858	176,295	59.3
Local Staff	22,684	22,530	19,378	12,303	76,895	25.9
Duty Travel	3,461	3,269	2,180	1,000	9,910	3.3
Supplies & Equipment	4,831	4,771	3,993	2,251	15,846	5.4
Common Services	4,330	4,958	4,518	1,990	15,796	5.3
Contractual Services	732	725	632	271	2,360	0.8
TOTAL	89,808	89,494	75,127	42,673	297,102	
Percentage of Total	30.2	30.1	25.3	14.4		100.0

14



PAN AMERICAN HEALTH ORGANIZATION

CD25/19 (Eng.)

ANNEX IV



X INTER-AMERICAN MEETING, AT THE MINISTERIAL LEVEL, ON FOOT-AND-MOUTH DISEASE AND ZOOSES CONTROL

— WORLD HEALTH ORGANIZATION

WASHINGTON, D.C., U.S.A., 14-17 MARCH 1977

RICAZ10/FR (Eng.)

17 March 1977

ORIGINAL: ENGLISH-SPANISH

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FINAL REPORT

The X Inter-American Meeting, at the Ministerial Level, on Foot-and-Mouth Disease and Zoonoses Control was held at the Headquarters of the Pan American Health Organization, Washington, D.C., from 14 to 17 March 1977, having been convened by the Director of the Pan American Sanitary Bureau pursuant to Resolution XIX approved by the Directing Council of PAHO at its XVII Meeting.

OFFICERS

On 14 March the heads of delegation met to elect the Officers of the Meeting, with the following results:

President: Dr. Carmelo Contreras Barboza
Minister of Agriculture, Venezuela

Vice Presidents: General Mario Mac-Kay Jaraquemada
Minister of Agriculture, Chile

Colonel Roberto Escobar García
Minister of Agriculture and Animal
Husbandry, El Salvador

Rapporteur: Dr. Oscar Valdés Ornelas
Director General of Animal Health
Ministry of Agriculture and Water
Resources, Mexico

Dr. Héctor R. Acuña, Director of the Pan American Sanitary Bureau, served as Secretary ex officio.

PARTICIPANTS

The following Governments were represented: Argentina, Barbados, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, France, Guatemala, Guyana, Haiti, Honduras, Jamaica, Kingdom of the Netherlands, Mexico, Nicaragua, Panama, Paraguay, Peru, Surinam, Trinidad and Tobago, United States of America, Uruguay, and Venezuela. Also present were observers for the United Kingdom and the following international organizations: Food and Agriculture Organization of the United Nations, Inter-American Development Bank, Inter-American Institute of Agricultural Sciences (OAS), International Bank for Reconstruction and Development, International Group for Agricultural Development in Latin America, International Office of Epizootics, International Road Federation, Organization of American States, Regional International Organization

for Plant and Animal Health, and United Nations Development Program. Also in attendance were observers from the American Society of Tropical Medicine Hygiene, the National Academy of Sciences (USA), and the Plum Island Animal Disease Center (USA).

At the inaugural session, an address was given by Dr. Héctor R. Acuña, Director of the Pan American Sanitary Bureau. He stressed the special importance of the present Meeting, which was taking place in the year of the 75th Anniversary of the founding of the Pan American Health Organization. The topics to be dealt with at the Meeting were highly topical, and their solution called for a multidisciplinary approach, as did most health problems. Latin America, which in the past had been described as a paradise for livestock rearing, was at present suffering from diseases, such as foot-and-mouth disease, which put a brake on livestock development and were an obstacle to the sale of livestock products. Fortunately, quite a few countries were free of foot-and-mouth disease, although it was very important for them because of the potential threat of its introduction from infected areas.

Dr. Acuña pointed out that the construction of the Pan American Highway in the regions of Darién in Panama and Chocó in Colombia represented an example of joint action for the benefit of the Hemisphere. However, the opening of the Highway would eliminate one of the natural barriers which had prevented the spread of foot-and-mouth disease from the infected zones to the disease-free areas. The problem would be dealt with in depth in the course of the Meeting.

He pointed out that great progress had been made in the animal disease control campaign. Efficient systems of quarantine, control, and epidemiologic surveillance had enabled diseases affecting millions of animals to be eradicated from several of the countries. On the other hand, the increase in production and the development of technology had brought new problems such as infectious bovine rhinotracheitis and bovine leukemia, both of which would likewise be discussed during the Meeting.

Similarly, it was recognized that the indiscriminate use of pesticides was one of the main factors in environmental pollution in the world today. Some pesticides, the organochlorines for example, were found in detectable levels in practically all foodstuffs. Hence it was essential that the countries make every effort to avoid those problems which affected animal and human health.

He expressed thanks to the Inter-American Development Bank and other international and bilateral institutions for the help they were providing to the animal health programs of the countries of the Americas, as reflected in better provision of foods and nutrients to improve the quality of life of all the inhabitants of the Hemisphere.

Next, Mr. Francis J. Mulhern, Administrator, Animal and Plant Inspection Service, Department of Agriculture of the United States of America, welcomed the participants on behalf of the U.S. Secretary of Agriculture and said that his country was gratified that the Meeting was being held in Washington, D.C. He stressed the importance of interdependence of the countries and the need for cooperation among them to cope with animal diseases, to cooperate in projects such as the Pan American Highway, and to determine the advantages and drawbacks of the use of pesticides. Hence the items to be dealt with during the Meeting were of the utmost importance. He felt sure that the debates would produce solutions for some of the animal health problems facing the countries of the Region.

When the first plenary session opened, the Secretary of the Meeting, Dr. Pedro N. Acha, Chief, Division of Disease Control, PASB, presented the provisional agenda, which was unanimously approved. He informed the Meeting that an exhibition had been organized showing PAHO publications generally and animal health publications in particular, including those of the Pan American Foot-and-Mouth Disease and Zoonoses Centers. Representatives interested could obtain any publications they wished on request.

Next, Dr. Raúl Casas, Director of the Pan American Foot-and-Mouth Disease Center, submitted the program and budget of the Center for 1977 and the estimates for 1978. He described the efforts being made to comply with the requests from the countries for services with the limited resources available. He referred to the activities carried out by the Center during 1976 in the fields of research, technical assistance, and training. Special interest had been aroused in the countries by the studies on oil vaccines developed in the new installations of the Center. The results obtained in various field tests in Argentina, Brazil, and Uruguay indicated that this vaccine provided protection for six months when applied to animals under two years of age and for 12 months in older animals. Interest had likewise been aroused by the work being done in the field, in cooperation with the Government of Brazil, to evaluate immunity levels, especially in bovine cattle. With regard to the future work of the Center, he said that it would be concentrated on coordination and support of the activities under way in the countries free of foot-and-mouth disease; the strengthening of control and eradication programs in the countries affected; the development of national systems of epidemiologic surveillance in the individual countries; the regional characterization of vesicular diseases throughout the Hemisphere; the improvement of evaluation of foot-and-mouth disease programs; the promotion of agreements between countries with adjacent frontiers; quality control and evaluation of vaccines; and the development of human resources.

When the debate began, the Representative of Paraguay expressed thanks on behalf of his country to the Center for the technical assistance it provided in relation to Paraguay's foot-and-mouth disease control activities, and he signified his country's support for the program and budget as presented.

The Representative of Colombia congratulated the Center on the work being carried out. He asked Dr. Casas whether, once the studies on oil vaccine were sufficiently advanced, assistance would be made available to the countries producing it and whether the changes that would have to be made in the existing laboratories in order to produce it would be very costly.

Dr. Casas replied that much of the present infrastructure could be utilized without major costs and reiterated that the Center was already cooperating with the countries in regard to oil vaccine, citing as examples Brazil, Argentina, and Uruguay.

The Representative of Argentina said that everyone agreed as to the great benefit gained from the work of the Center, but it was essential that each individual country give its support and cooperation, on the basis of the services received, if the programs were to make headway, and he requested that these services be quantified with a view to the application of two forms of participation: (1) on the basis of the economic capacity and population of the countries, and (2) in relation to the services received.

The Representative of the Kingdom of the Netherlands, after expressing thanks for the help received from the Center, said that the report submitted made no reference to the samples sent to the Center by Curaçao. Dr. Casas assured him that the omission would be corrected.

The Representative of Venezuela supported the program and budget as submitted and inquired what experience the Center had had in regard to attenuated live virus vaccine as used in his country.

Dr. Casas explained that the Center had been doing research on attenuated live virus vaccines since 1956 and that in the last few years a review of the inoculation route had been made in light of present-day knowledge of the pathogenesis of the disease. Preliminary studies had been made with a view to cooperation with Venezuela, the only country in the Americas using the vaccine, but the results were at an early stage and not definitive.

The Representative of the United States of America likewise expressed satisfaction with the work of the Center. He felt that the essential task was to reduce the incidence of the disease, to prevent its introduction into the zones of the Americas at present disease-free, and to continue the study of the vaccines.

The Representative of the Kingdom of the Netherlands asked whether studies had been undertaken on the vaccine in different animal species. Dr. Casas replied that preliminary research was being done on the vaccine in porcine animals.

The Representative of the Dominican Republic supported the program and budget as presented and asked whether the training services were to be strengthened in countries free of foot-and-mouth disease.

Dr. Casas explained that there was a consultant who provided permanent services to the disease-free countries. In the course of 1977, a seminar would be held for the Central American countries, and another would be held in Mexico; and cooperation was planned in other training activities, with the participation of staff from the disease-free countries.

The Representative of Panama likewise supported the Center's budget. He gave an account of the efforts made by his Government to install the Regional Vesicular Disease Diagnosis Laboratory and requested the Organization and the countries to continue to do everything in their power to ensure that the project materialized.

The Representative of Ecuador asked whether the Center's budget included an item for vesicular stomatitis control. Dr. Casas said that the South American Commission for the Control of Foot-and-Mouth Disease (COSALFA) had raised the problem, which was one of growing concern to the countries of the area; but there was no specific heading for that problem. If the countries considered it a priority topic, the necessary resources would have to be provided. Up to the present, the work had been confined to the diagnosis of samples and sera.

The Representative of Uruguay supported the work of the Center and the program and budget submitted.

The Representative of Nicaragua, also supporting the work of the Center, expressed surprise that 80 per cent of the budget was devoted to personnel costs and only 20 per cent to operational costs.

Dr. Casas agreed that this problem did exist, and during 1976 only the financial help received from external sources had made it possible to proceed with some of the research, assistance, and training activities.

Dr. Acha found the concern expressed by the Representative of Nicaragua perfectly understandable. The increase in staff salaries had indeed made it necessary to reduce the number of professional posts in the Center over the last few years. It was for that reason that voluntary contributions had been requested, and some Governments had responded to the appeal. Support had also been sought and obtained from IDB for the work of the Center, since the total investment made by the countries in programs for the control and eradication of foot-and-mouth disease was considerable. He pointed out that technical assistance constituted the main work of the Center, although unquestionably research and training of personnel for the programs were very important.

The Representative of Brazil considered that the work being done by the Center was excellent. In Brazil, the Government was striving to give top priority to activities for the development of agriculture and animal husbandry, and the budget earmarked for the sector in 1977 was 30 per cent higher than that of the previous year. He went on to summarize the work being done in Brazil on foot-and-mouth disease control.

The President, speaking in his capacity as the Representative of Venezuela, said that it was essential to make a careful analysis of the results achieved through the work of the Center. He also thought that a study should be made of the possibility of setting up a research fund to enable the necessary resources to be obtained for studies regarded as necessary in such fields as vesicular stomatitis and vaccines. He suggested that countries interested in expanding research might arrange new talks on the subject.

The Representative of Argentina said that his country was prepared to support the Venezuelan Representative's proposal. The contribution by Argentina would be directed toward strengthening the projects and activities of the Center of interest to his country.

Next, Dr. Joe Held, Director, Division of Research Services, National Institutes of Health, United States of America, presented the report of the Scientific Advisory Committee of the Pan American Zoonoses Center. Referring to the most important aspects of the work done by the Center over the past two years, he summarized the recommendations made by the Committee at its November 1976 meeting in relation to the future work of the Center. He also mentioned the efforts being made, together with the Government of Argentina, to arrange suitable installations for the Center, since they were essential if it was to carry out its work satisfactorily.

Dr. Luis V. Meléndez, Director of the Pan American Zoonoses Center, then presented the program and budget of the Center for 1977 and the estimates for 1978. By means of a set of slides he illustrated the salient aspects of the activities carried out in the fields of technical assistance, research, laboratory services, and personnel training. He detailed the cooperation provided by the Center to the various country programs for the control of zoonoses. He mentioned the requests for additional funds submitted to international credit agencies such as the Inter-American Development Bank to provide more effective support to the countries' animal health programs. He referred to the continuation at the Center of the animal health planning course, now in its seventh year, which 109 fellows had attended to date. He pointed out that technical assistance embraced two levels, internal and external, and that its quality could not be improved without the necessary financial support, especially in the matter of research and laboratory services. He reiterated that the Center was fully determined to cooperate with the countries in advancing their zoonoses control programs, and he only hoped he could count on the funds required to

cope with the requests for technical assistance which the Center was receiving.

When the debate began, the Representative of Argentina reiterated that his Government was anxious to provide the Center with suitable premises. Argentina was offering first-class installations for this purpose at Recreo, 20 km from Santa Fe. However, if it was considered necessary, conversations could be continued with a view to reaching some other solution to the problem. He described the activities which his country was carrying on for the control of animal diseases, especially brucellosis, bovine tuberculosis, and rabies, which were causing a total annual loss of US\$2,500 million.

Next, Dr. Adolfo Maillié, Under-Secretary for Sanitary Medicine, Ministry of Social Welfare, Argentina, said that the Argentine Government felt that the installations it was offering in Recreo, in the center of the livestock rearing region of the country, would be suitable for CEPANZO. It had also tried to obtain the services of the School of Veterinary Science of the University of Buenos Aires to cooperate with the Center. Furthermore, efforts were being made to locate one of the laboratories of the Center in the health laboratory complex which the Government was planning to build near Buenos Aires. Thus Argentina was doing everything possible to cooperate with the Center with a view to helping it to continue its valuable work for the benefit of all the countries.

On behalf of his Government, the Representative of Colombia expressed thanks for the assistance received from the Center. He suggested that the possibility be considered of organizing a course to train personnel in health program administration. He also expressed approval of the program and budget submitted.

The Representative of Paraguay likewise thanked the Center for all the support given to his country in its animal disease control activities, especially in regard to brucellosis, rabies, and bovine tuberculosis. He intimated that he would vote in favor of the program and budget submitted.

The Representative of Venezuela expressed himself in favor of the program presented by the Center. He confirmed the offer made by the Venezuelan Government at the previous meeting, namely to give any help needed in providing the Center with suitable installations. He outlined the activities being carried out by his country in regard to equine encephalitis, rabies, brucellosis, bovine tuberculosis, leptospirosis, food hygiene, and animal health planning.

The Representative of Haiti likewise expressed thanks for the help his country received from the Center. He agreed with the Representative of Colombia that it would be extremely useful to have schemes for training in program administration and planning. With regard to foot-and-mouth disease,

a topic to which he had not had an opportunity to refer previously, he asked whether it would be possible for PAHO to verify the existing surveillance structures to see whether they were adequate to meet present needs or whether they would have to be strengthened.

The second plenary session, in the afternoon of 14 March, began with the presentation by the Observer for the Inter-American Development Bank, Mr. Fernando Cáceres, concerning IDB and animal health programs in the Americas. He referred to the financial assistance provided by IDB to the countries for development programs, amounting to US\$10,222 million. Of this figure, \$2,400 million represented 218 loans for agriculture and animal husbandry projects. In all, \$107 million had been devoted to animal health programs. He reiterated IDB's desire to continue to give full support to livestock development programs and in particular to animal health projects.

The next topic to be discussed was agenda item 8: Panel on the Pan American Highway and Foot-and-Mouth Disease. Under this item the following papers were presented:

- Importance of the Pan American Highway for Hemispheric Development, by Mr. Eduardo Dibós, Honorary President for Life of the Pan American Highway Congresses
- Foot-and-Mouth Disease in Colombia in Relation to the Pan American Highway, by Dr. Miguel Reyes Gómez, Executive Director, Colombian Agricultural and Livestock Institute (ICA)/U.S. Department of Agriculture Project
- Programs for the Prevention of Foot-and-Mouth Disease in Central America and Panama, by Dr. Miguel Alberto Sandoval, PASB Area Adviser, Panama
- Control and Prevention of Foot-and-Mouth Disease on a Hemispherical Level, by Sir William Henderson, Secretary to the Agricultural Research Council, United Kingdom
- Present and Future Status of the Construction of the Pan American Highway, by Mr. Jorge Alberto Loré, Director, Pan American Highway (Panama), Director of the Darién Subcommittee.

The debate on the item began at once. The Representative of Panama stressed the importance to his country of the Darién area, which constituted 22 per cent of the national territory. He described the measures adopted by his Government to strengthen surveillance in that zone and to prevent the advance of foot-and-mouth disease to the northern part of the Hemisphere.

Next, Dr. Luis Carlos Cigarruista, Executive Director of the Panama/US Commission for the Prevention of Foot-and-Mouth Disease, said

that Panama was making a genuine effort to achieve the aim of keeping the Darién region free of foot-and-mouth disease. He gave a brief account of the present situation and the future prospects for control activities, which were of great importance for all the countries of the Region.

The Representative of the United States of America said that his country was anxious that the efforts being made to complete the Pan American Highway should continue. At the same time, the danger of the spread of foot-and-mouth disease to Central and North America must be borne in mind. The agreement between Colombia and the United States of America to prevent foot-and-mouth disease in the Chocó area was due to terminate in 18 months, and it was essential that more rapid progress be made if the goal was to be reached.

The Representative of Colombia stressed the importance of livestock development for his country and the consequent concern of his Government to eradicate foot-and-mouth disease from the country. A loan had been obtained from IDB for diagnostic centers and equipment, and it would be useful to expand and strengthen the present agreement with the U.S. Department of Agriculture with a view to intensifying the activities, especially in the Atlantic coast area, where the largest numbers of head of cattle were to be found.

The Observer for the International Office of Epizootics (IOE) said that IOE was extremely interested in the topic now under discussion, having been engaged for many years in matters connected with the control of foot-and-mouth disease.

The Representative of the United States of America again intervened in the debate to refer to the statement by the Representative of Colombia. He said he realized that there were many obstacles to the completion of the project, but only 18 months were left, and he would like to see the project advancing more rapidly.

The Representative of Brazil referred to the paper read by the Observer for IDB and thanked IDB for the support it was providing for programs in the agriculture and animal husbandry sector. He felt that the Organization and IDB should study the possibility of direct investment of funds by IDB to promote the programs of the Pan American Foot-and-Mouth Disease and Zoonoses Centers; and he asked that a specific recommendation be adopted to that effect.

The Representative of Argentina described the criteria and the policy which the Argentine Government intended to follow in regard to health campaigns, with a view to improving the quality of vaccines, changing the techniques and services for controlling private laboratories, and providing the advisory services needed for the efficient distribution of vaccines.

A number of shortcomings existing at present in regard to planning, decision-making and hierarchy would be reviewed, and resources would be obtained from the livestock producers themselves. He also said that 600 professional and paratechnical staff had been added to the 3,800 technical, paratechnical and administrative staff already employed.

The Observer for OIRSA agreed with the views of Sir William Henderson concerning the measures to be adopted in the event of an outbreak of foot-and-mouth disease. He mentioned a study carried out by OIRSA on the prevention of foot-and-mouth disease in the Member Countries.

At the third plenary session, on Tuesday morning, 15 March, the Chair was taken by the Minister of Agriculture of Chile, General Mario Mac-Kay, and the Meeting took up the discussion of item 4: Present Status of the Application of the Recommendations and Achievement of the Goals for Animal Health and Veterinary Public Health Established in the Ten-Year Health Plan for the Americas.

The Advisers in Veterinary Public Health of the various PAHO Areas presented the consolidated reports of the countries included in each Area, in the following order:

- Country Reports, Area I (Bahamas, Barbados, Guyana, Jamaica, Surinam, Trinidad and Tobago, Venezuela, France, Kingdom of the Netherlands, and United Kingdom), presented by Dr. Eugene Papp, Area Adviser
- Country Reports, Area II (Cuba, Haiti, Mexico, and Dominican Republic), presented by Dr. Enrique Mora, Area Adviser
- Country Reports, Area III (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama), presented by Dr. Jorge Escalante, Area Adviser
- Country Reports, Area IV (Bolivia, Colombia, Ecuador, and Peru), presented by Dr. Benjamín L. Morán, Area Adviser
- Country Reports, Area V (Brazil), presented by Dr. Juan Zapatel, Area Adviser
- Country Reports, Area VI (Argentina, Chile, Paraguay, and Uruguay), presented by Dr. Víctor Moscoso, Area Adviser
- Report for Canada and the United States of America, presented by Dr. Gustavo Reta, Regional Consultant in Veterinary Public Health.

At the beginning of the fourth plenary session, on 15 March, in the afternoon, an interesting film was shown, illustrating the work being done in connection with the construction of the Pan American Highway in the Darién Zone.

After the film, the Representative of the United States of America gave an account of an outbreak of Newcastle disease in exotic birds which had occurred in his country, causing losses estimated at US\$4 million. In spite of the fact that there were quarantine stations, it was a well-known fact that contraband activities went on which enabled these birds to be brought into the country. Similarly, there had been a change in regard to Aujeszky's disease in pigs, and in April 1977 a seminar would be held with a view to learning more about this problem.

Dr. Mário V. Fernandes, Chief, Department of Human and Animal Health, PASB, next presented a report on compliance with the resolutions of the IX Inter-American Meeting on Foot-and-Mouth Disease and Zoonoses Control, reviewing the activities carried out by the countries and by the Organization since that Meeting.

The Representative of Trinidad and Tobago next announced that his Government agreed in principle, pursuant to Resolution XIII of the IX Meeting, to the compromise by which financial and human resources would be provided for the establishment of the program of education in veterinary medicine for the countries of the Caribbean area. His country was also looking forward to a meeting with other countries of the area to deal with the subject.

Next, Dr. Jorge F. Ferrer, Professor of Microbiology and Chief, Section on Viral Oncology, University of Pennsylvania Leukemia Studies Unit, U.S.A., presented the paper entitled "Advances in Bovine Leukemia." He described the symptoms and lesions characteristic of the disease and the research conducted on the epizootiology of the disease in various countries. He went on to refer to the methods of diagnosing bovine leukemia, the ways in which the disease is transmitted, its economic impact on the exporting countries, and its possible dangers for the human species.

The President, speaking in his capacity as the Representative of Chile, thanked Dr. Ferrer for his statement.

The Representative of Mexico asked whether it had been proved that the virus in milk was destroyed by pasteurization, and whether studies had been made on the possible changes produced by the disease in bone marrow tissues. Dr. Ferrer said that in Wisconsin it had been shown that BLV was destroyed by pasteurizing milk, but it had not been possible to determine whether the disease affected the bone marrow.

The Representative of France said that the problem was being studied in his country, as well as in other European Community countries. Some cases of bovine leukemia existed in France, and there was a preference for serologic methods in diagnosing the disease.

The Representative of Mexico inquired about differential diagnosis in the case of eye tumors (carcinoma spinosa). Dr. Ferrer explained that leukemia in the eye only affected a ganglion of the posterior part of the eyeball and was different from carcinoma of the eye.

The Observer for the International Office of Epizootics referred to the cases of bovine leukemia found in Venezuela in eight states, and said that a symposium was to be held shortly at which the topic would be dealt with.

The Representative of Argentina asked whether there was any evidence of the disease in South America. Dr. Ferrer replied that according to a number of serologic tests, the rate of infection was 20 per cent in some herds.

The Representative of the Dominican Republic said that he was interested to know whether any study had been made of the relationship between leukemia and endemic carcinoma of the ethmoid bone. Dr. Ferrer said no studies had been carried out on the subject.

The Representative of Haiti said he would like to know whether there was any evidence that the infection affected human beings. Dr. Ferrer replied that it had not been proved, although there was a possibility that the virus was contagious for human beings, since it had been found possible to reproduce it in human cell cultures.

The Representative of Venezuela congratulated Dr. Ferrer on his presentation and outlined the studies on leukemia underway in his country.

The Representative of Trinidad and Tobago thanked Dr. Ferrer for the information given; he had taken careful note of it as being of the utmost interest.

The Representative of the Kingdom of the Netherlands asked whether the virus had been found in other species. Dr. Ferrer said that in Germany a similar virus had been isolated in sheep, to which the infection had been transmitted from bovines.

Next, Dr. Hugo Caggiano, Director General of the Health Campaign Service (SELSA), Argentina, presented the report of the IV Regular Meeting of the South American Commission for the Control of Foot-and-Mouth Disease (COSALFA) held in Rio de Janeiro, Brazil, on 10 and 11 February 1977. The report contained a series of recommendations on the work being done in the member countries of the Commission to combat the disease.

The Representative of Nicaragua pointed out that at the COSALFA meeting his country had requested that studies on vesicular stomatitis be made not only in South America but also in Central America, in view of the

importance of eradicating the disease. He then submitted a draft resolution in support of the work being done by COSALFA.

The next speaker, Dr. Luis V. Meléndez, presented the report of the Inventory of Veterinary Diagnosis Laboratories in the Americas, prepared by the Pan American Zoonoses Center pursuant to Resolutions XX and XXII of the IX Inter-American Meeting on Foot-and-Mouth Disease and Zoonoses Control.

During the second part of the session, the Rapporteur read out draft resolutions on the program and budget of the Pan American Foot-and-Mouth Disease and Zoonoses Centers respectively, and they were unanimously approved.

Dr. Acha, speaking on behalf of the Director of PASB, expressed thanks for the excellent support given by the countries to the Centers, enabling them to proceed with their activities in aid of the country animal health programs. He reiterated the need to provide the Centers with additional resources, since inflation and other factors prevented them at times from providing all the services which the countries requested of them in the research field.

The Representative of Venezuela submitted a draft resolution as proposed earlier by the Minister of Agriculture of his country concerning the establishment of a research fund to provide support for the Pan American Foot-and-Mouth Disease and Zoonoses Centers in that field.

The Rapporteur next read out a draft resolution expressing appreciation of the work of the Scientific Advisory Committee of the Zoonoses Center, and it was unanimously approved.

Dr. Rubén Lombardo, of the Pan American Zoonoses Center, submitted papers on epidemiologic surveillance of equine encephalitis and rabies, respectively, in the countries of the Americas. He described the success achieved with these programs over the past year, and the difficulties encountered in carrying on the work. He reiterated the need to maintain active surveillance of these two diseases, which caused huge economic losses in most of the countries of the Region. He stressed the solid support given by the Zoonoses Center for the strengthening of these surveillance systems.

The Representative of Trinidad and Tobago and the Representative of the Kingdom of the Netherlands asked questions concerning the reports submitted, and they were answered by Dr. Lombardo and Dr. Acha.

Dr. Roberto Goić, Pan American Foot-and-Mouth Disease Center, next presented a report on surveillance of foot-and-mouth disease. He explained that the stage of advance of surveillance activities varied considerably in the different countries, and as a result the system at Hemisphere level was still deficient. It was essential that the Governments devote more attention

to this problem if the goals set were to be reached. He mentioned the annual courses on epidemiology and information systems held in Rio de Janeiro, with the cooperation of the Brazilian Government and IDB. Unfortunately, the financial assistance requested from UNDP for this program had not materialized, but it was to be hoped that thanks to the efforts of the countries positive results would emerge in the course of 1977.

At the fifth plenary session, on the morning of 16 March, the Chair was taken by Dr. Carmelo Contreras. The session began with a statement by Mr. Robert Bergland, Secretary of Agriculture of the United States of America. The speaker expressed his satisfaction at having the opportunity to address the Meeting. The United States Government was extremely interested in cooperating actively with all the countries of the Region with a view to finding solutions to common problems. He referred to the great progress made in agriculture, which had made exceptional yields possible. Nevertheless, difficulties of various kinds had arisen which had produced serious world nutrition problems. It was unfortunate, in that connection, that his country's reserve food stocks had dwindled over the last few years and that the country could not produce all the grains needed to satisfy the world's needs. The improvement of nutrition would involve the application of all available technology and the combined efforts of technicians and scientists throughout the world. His country was ready to continue cooperating in the programs for the control of animal diseases such as foot-and-mouth disease, and in animal health activities, which were of the utmost economic importance. He was convinced that the recommendations emerging from the Meeting would be extremely useful in regard to the activities being carried out by the countries in the field of animal health, and would bring about a higher standard of well-being for the various peoples. In conclusion he said he was convinced that no country could enjoy full sovereignty unless it was capable of feeding its people properly.

The President thanked the Secretary of Agriculture of the United States of America for the unusual cachet which his statement had given to the Meeting. He said that in Caracas he himself had proposed that the RICAZ Meeting should deal with broader problems of common interest going beyond the control of animal diseases. All were agreed that the task of feeding the world was a responsibility that should be shared by every country; otherwise, it would be impossible to ensure world peace. On behalf of all the participants he congratulated Mr. Bergland on his statement and assured him of the solidarity of all the countries represented at the Meeting.

The Representative of Haiti thanked the President for expressing so eloquently to the Secretary of Agriculture of the United States of America the sentiments of all the participants.

The next topic for discussion was item 10: Panel on Pesticides and Health. The following papers were presented:

- Pesticide Management Problems of Public Health Concern in Central America, by Dr. John E. Davies, Chairman of the Department of Epidemiology and Public Health, University of Miami School of Medicine, Florida, U.S.A.
- Treatment of Cattle Diseases with Insecticides and their Residual Action in Foodstuffs of Animal Origin, by Dr. Ralph A. Bram, Vector Biological Surveillance Control, Veterinary Services, Department of Agriculture, U.S.A.
- Importance of Regulations for the Use of Pesticides and the Contamination of Foodstuffs, by Dr. Emilio Víctor Pineda, Assistant Technical Director of the Argentine Institute for Standardization of Materials, Buenos Aires, Argentina.
- Problems Involved in the Establishment of Laboratories for the Control and Detection of Pesticides: Minimum Standards for their Establishment, by Dr. Waldemar F. Almeida, Biological Institute, São Paulo, Brazil, and Mrs. María Elisa W. de Almeida, of the Adolfo Lutz Institute, São Paulo, Brazil.

Following the presentations, the Representatives of Honduras, Jamaica, the Kingdom of the Netherlands, and the Dominican Republic asked a series of technical questions on the papers presented, and they were answered by Dr. Davies and Dr. Bram.

In the second part of the session, the Rapporteur placed before the plenary session the pending draft resolutions on the assistance given by IDB to animal health programs, animal disease diagnosis laboratories, and an animal health research fund, and they were unanimously approved. Likewise approved were draft resolutions on the Regional Vesicular Disease Diagnosis Laboratory and on agreements for the prevention of foot-and-mouth disease, subject to amendments proposed by the Representative of Panama and the Representatives of Guatemala and Nicaragua, respectively.

Next, a draft resolution concerning vesicular stomatitis was submitted. The Representatives of the United States of America and Nicaragua made statements on the subject and announced their intention of submitting their amendments in writing at the next session.

The Representative of Mexico said that in view of his country's experience with vesicular stomatitis his Government would like to offer the services of the new national laboratories now being completed for the research on this disease regarded as necessary.

The Representative of Jamaica, referring to the report on the status of foot-and-mouth disease presented at the previous session, requested that in future such reports include a fixed-term program for achieving the eradication of the disease.

The Representative of Argentina said that his country would like to see the Pan American Foot-and-Mouth Disease Center undertake exhaustive studies with a view to determining the possible existence of the foot-and-mouth disease virus in milk products such as caseine, so as to safeguard the health interests of the importing countries, which would continue to follow their present policy as long as there was no final solution to the problem. He said he would submit a draft resolution on the subject.

The Representative of Panama indicated that he too would submit a draft resolution, on the subject of the Pan American Highway.

Taking up the final item of the morning session, Mr. Julián Rodríguez Adame, General Coordinator of the International Group for Agricultural Development in Latin America (IGAD), said that the Group felt responsible for maintaining liaison between the Latin American countries and the 12 main international aid agencies in the matter of obtaining financing and technical assistance. He said that the World Agricultural Fund contended that the countries of Latin America and the Caribbean area were better off socially than other countries in the world. Nevertheless, the views of the Latin American countries could not be ignored, since they provided about 30 per cent of the food needed by mankind. He acknowledged the support received by IGAD from the Representatives of the various countries, and thanked Argentina for its valuable offer of infrastructure and technical facilities for the study of meat technology and foot-and-mouth disease control. He urged the countries to make efforts to reduce the losses caused by diseases and pests to agricultural and livestock products and to bear in mind that it was easier to protect what was produced than the input necessary for producing it.

The sixth plenary session took place in the afternoon of March 16, with Col. Roberto Escobar García, Minister of Agriculture and Animal Husbandry of El Salvador, in the Chair. When the session began, the Representative of the United States of America stressed the importance for all the countries of the papers on pesticides presented at the previous session, since there was much to learn from them. With regard to the studies proposed by the Representative of Argentina to determine the presence of foot-and-mouth disease virus in milk and milk derivatives, he said that the United States of America had undertaken a number of studies on the subject, and he would be very happy to discuss the detailed findings with the Representative of Argentina. He said that the measures taken as a result of the research were designed exclusively to safeguard health and not to protect economic interests. He pointed out that some food products contained very high levels of pesticides. That was not a matter which need

cause alarm, but at the same time it was essential to be aware of the existence of the problem and to take appropriate measures to restrict the possible long-term effects of pesticides in plants and animals.

The Meeting next turned to item 9: Panel on the Epidemiology, Diagnosis and Control of Infectious Bovine Rhinotracheitis (IBR). The following papers were presented:

- Present Status of Infectious Bovine Rhinotracheitis (IBR) in the Americas, by Dr. Robert F. Kahrs, Professor of Epidemiology, New York State College of Veterinary Medicine, Cornell University, Ithaca, New York, U.S.A.
- Diagnosis of Infectious Bovine Rhinotracheitis, by Dr. Robert A. Crandell, Laboratories of Veterinary Diagnostic Medicine, College of Veterinary Medicine, University of Illinois, Urbana, Illinois, U.S.A.
- Measures for the Prevention and Control of Infectious Bovine Rhinotracheitis, by Dr. James A. House, Director, Biological Research, Pitman-Moore, Inc., Washington Crossing, New Jersey, U.S.A.

The many statements by the Representatives of the countries indicated their interest in the subject matter of the Panel, especially matters relating to clinical and laboratory diagnosis, the effectiveness of prevention by means of vaccines, the dangers of animal importation, and possible transmission through semen.

The Representative of France gave an account of the experience gained by his country with animals shipped to Italy in utilization of inactivated vaccines, the results of which were good, leading to a reduction of the incidence of cases in bovines which had previously caused severe losses on their arrival in Italy.

The Observer for IOE said that the disease had been known in Europe and the Soviet Union since the end of the last century under the name of coital vesicular exanthem, and its appearance was frequent following the transport of animals, manifesting itself in various clinical and subclinical forms. At the present time, it could be diagnosed by means of cell cultures, complement fixation, seroneutralization, gel precipitation tests, and immunofluorescence.

In the second part of the session, draft resolutions were submitted for consideration, and unanimously approved, on the topics of vesicular stomatitis; coordination for a diagnostic study of the animal health situation; cooperation by FAO in foot-and-mouth disease programs; pesticides; place of the next Meeting; 75th Anniversary of PAHO; and COSALFA. The draft resolution on rabies and equine encephalitis surveillance was approved

subject to an amendment submitted by the Representative of Colombia for the inclusion in surveillance of salmonellosis, leptospirosis, tuberculosis, brucellosis, and food poisoning infections.

Still pending approval were a draft resolution on the Pan American Highway submitted by the Representative of Panama, and another submitted by the Representative of Argentina on survival of the foot-and-mouth disease virus in milk.

When the Rapporteur read out a draft resolution concerning the possibility of a change in the format of the annual Meeting of RICAZ, the Representative of the United States of America congratulated PAHO on the organization of the meetings, which in his opinion had been very good and had given an opportunity for eminent specialists to brief the participating countries on the acquisition of new techniques. Nevertheless, he suggested that a change might be made in the ratio of time spent on the presentation of topics to time devoted to their substantive discussion; and he stressed his support for his country's proposal.

In the debate which ensued, statements were made by the Representatives of Haiti, the Kingdom of the Netherlands, the Dominican Republic, the United States of America, Jamaica, Guyana, Argentina, Honduras, Costa Rica, El Salvador, and Mexico, expressing a variety of views on the terms in which the proposal was couched.

Dr. Acha reminded the participants that at previous Meetings similar debates had occurred in which changes were proposed in the format adopted for conducting the Meetings. The country reports had been consolidated on the proposal of the Representatives and were now presented by Areas rather than by individual countries. He explained that the Organization was anxious to adopt the format which best suited the countries. With regard to the proposal that there should be a preliminary meeting at the technical level followed by another at the ministerial level, such a proposal would involve additional cost which could only be covered by contributions from the very countries that were not willing to make them. He nevertheless assured the Meeting that any formula recommended by the countries would be accepted by PAHO.

It was suggested, and accepted by the proposing country and the Representatives attending the Meeting, that the proposal should be included in the Final Report in the following form:

Considering that the organization of the RICAZ Meetings requires long preparation on the part of the Secretariat and the Representatives;

Considering that certain changes in format could make the meetings more fruitful and more interesting,

It is proposed that the Secretariat consider changing the RICAZ Meeting format so as to provide for a more effective meeting, taking into consideration the following items:

- (a) To limit the topics for discussion.
- (b) To shorten scientific presentations.
- (c) To limit presentations to summaries, the complete papers being published in the Final Report of the Meeting.
- (d) To appoint a panel to discuss each presentation and the problems associated therewith.
- (e) To encourage more discussion of each presentation by the participants.

Dr. Acha read out a communication received from the Government of Ecuador confirming the invitation to hold the XI Inter-American Meeting in Quito in 1978.

The Representative of Panama presented excuses on behalf of his Government for having been unable to proceed with the plans to hold the X Meeting in Panama, and asked that RICAZ consider the possibility of holding the XII Meeting there in 1979.

Col. Roberto Escobar García, Minister of Agriculture and Animal Husbandry of El Salvador, extended an invitation to all the countries to participate in the VII Inter-American Meeting on Agriculture to be held in June at San Salvador.

The seventh session took place on the morning of 17 March, with Dr. Carmelo Contreras, Minister of Agriculture and Animal Husbandry of Venezuela, in the Chair. The President invited the Representatives to raise any general matters.

The Representative of the Kingdom of the Netherlands suggested Curaçao as the possible venue for the RICAZ XII Meeting in 1979.

The Rapporteur submitted to the Representatives for their consideration the still pending resolution on survival of the foot-and-mouth disease virus in milk, and it was unanimously approved, subject to amendments proposed by the Representative of the United States of America, taking account of the comments by the Representatives of Argentina and Panama, Dr. Acha, and the Observer for IOE.

The draft resolution on the Pan American Highway was then submitted, and was likewise unanimously approved, subject to amendments proposed by the Representatives of Colombia, Honduras and Costa Rica.

After a short recess, the closing session was held. The Rapporteur read out the Final Report of the Meeting, and then submitted it to the President for consideration by the Representatives, who unanimously approved it.

Dr. Eusebio del Cid Peralta, Assistant Director of the Pan American Sanitary Bureau, then spoke in the name of the Director, Dr. Héctor R. Acuña. He congratulated the Officers and the other Representatives on the fruitful work accomplished in the course of the deliberations. For the Organization, in the year of its 75th Anniversary, the Meeting had been an event calculated to enhance its standing. He assured the Meeting that PAHO would continue to provide the countries with the technical cooperation they sought. Similarly, through the Pan American Foot-and-Mouth Disease and Zoonoses Centers, it would continue to give full support to the programs for the control and eradication of animal diseases, since it was well aware of the importance they represented not only for animal health but for human health as well.

Finally, Dr. Carmelo Contreras thanked the Representatives for the honor they had again done him by electing him President of a RICAZ Meeting for the second time. He referred to the growing importance of the Meetings, which had been gradually expanding the scope of their deliberations to include matters going beyond the immediate problems of foot-and-mouth disease and zoonoses control. He stressed the tremendous responsibility that the agriculture and animal husbandry sector had to assume in the world today, and consequently the imperious need for all the countries to do whatever lay in their power to strengthen any action related to matters which had so great an impact on food production. The Ministers of Agriculture should make an in-depth analysis of the socioeconomic aspect of the process of production and urge other government departments to devote more attention to the problems that existed in the rural and urban-fringe areas, where the production process really began.

On behalf of all the Representatives he thanked PAHO and its staff for the effort they had made to ensure the success of the Meeting.

RESOLUTIONS APPROVED

The following resolutions were approved in plenary sessions:

RESOLUTION I

PROGRAM AND BUDGET OF THE PAN AMERICAN ZONOSSES CENTER FOR 1978

THE X INTER-AMERICAN MEETING,

Bearing in mind Resolution IX of the IX Inter-American Meeting on Foot-and-Mouth Disease and Zoonoses Control concerning the program and budget of the Pan American Zoonoses Center for 1977;

Having studied carefully the proposed program and budget for 1978 (Document RICAZ10/8); and

Considering that the Center's research, technical cooperation, and training activities in support of the zoonoses control and eradication programs being carried out by the countries of the Americas are of vital importance,

RESOLVES:

1. To express its full support of the Pan American Zoonoses Center and its proposed program and budget for 1978.

2. To reaffirm the need for the Center to continue its research, technical cooperation and training activities in support of the countries of the Americas.

3. To recommend to the XXV Meeting of the Directing Council of PAHO that it give favorable consideration to approving the program and budget of the Center for 1978 as submitted in Document RICAZ10/8.

4. To thank the countries, international organizations, and especially the Government of Argentina, for their valuable financial support of the activities of the Center.

(Approved at the fourth plenary session,
15 March 1977)

RESOLUTION II

PROGRAM AND BUDGET OF THE PAN AMERICAN FOOT-AND-MOUTH
DISEASE CENTER FOR 1978

THE X INTER-AMERICAN MEETING,

Bearing in mind Resolution V of the IX Inter-American Meeting on Foot-and-Mouth Disease and Zoonoses Control concerning the program and budget of the Center for 1977;

Having studied carefully the proposed program and budget for 1978 (Document RICAZ10/12); and

Considering that the activities of the Center are of vital importance to the programs for the prevention, control and eradication of foot-and-mouth disease in the Americas,

RESOLVES:

1. To express its full support of the Pan American Foot-and-Mouth Disease Center and of its proposed program and budget for 1978.
2. To affirm that it regards the role played by the Pan American Foot-and-Mouth Disease Center in the promotion, development and coordination of programs for the prevention, control and eradication of foot-and-mouth disease as indispensable.
3. To recommend to the XXV Meeting of the Directing Council of PAHO that it give favorable consideration to approving the program and budget of the Center for 1978 (Document RICAZ10/12).
4. To express its special thanks to the Governments of Brazil, Colombia, Ecuador, the United States of America, Uruguay, and Venezuela for the voluntary contributions of human, physical and economic resources to the Center during the financial year 1977.
5. To thank UNDP, FAO and IDB for the outstanding cooperation they provide for the development of the Center's program.
6. To recommend to the Ministers of Agriculture that they provide additional human, physical and economic resources for the development of the program of technical cooperation in 1977-1978.

(Approved at the fourth plenary session,
15 March 1977)

RESOLUTION III

VOTE OF THANKS TO THE SCIENTIFIC ADVISORY COMMITTEE
OF THE PAN AMERICAN ZONOSSES CENTER

THE X INTER-AMERICAN MEETING,

Recognizing the importance of the scientific and technical activities of the Pan American Zoonoses Center for acquiring a better knowledge of the programs for the control and eradication of the zoonoses;

Having examined the report of the Scientific Advisory Committee on the work being done by the Center; and

Considering the high scientific and academic standing of the members of the Scientific Advisory Committee,

RESOLVES:

1. To express its thanks to the Scientific Advisory Committee for the broadly based and penetrating analysis of the program of scientific and technical activities of the Pan American Zoonoses Center and to endorse its recommendations.

2. To reiterate its desire that the researchers comprising the Scientific Advisory Committee continue to provide their cooperation, guidance and advice in connection with the program of activities of the Pan American Zoonoses Center.

(Approved at the fourth plenary session,
15 March 1977)

RESOLUTION IV

CONTRIBUTION OF THE INTER-AMERICAN DEVELOPMENT BANK TO ANIMAL HEALTH
PROGRAMS AND SUPPORT FOR THE ACTIVITIES OF THE PAN AMERICAN
FOOT-AND-MOUTH DISEASE AND ZONOSSES CENTERS

THE X INTER-AMERICAN MEETING,

Bearing in mind the valuable financial assistance provided by the Inter-American Development Bank to the countries for the preparation and execution of their animal health programs;

Considering the need to supplement the financial support given to the Pan American Foot-and-Mouth Disease and Zoonoses Centers in view of the budgetary difficulties confronting both Centers in carrying out the activities required of them in connection with the programs in question, as pointed out in Resolution VI of the VIII Inter-American Meeting on Foot-and-Mouth Disease and Zoonoses Control; and

Bearing in mind the communications addressed by the Ministries of Health and Agriculture of the majority of the countries of the Americas to the President of the Inter-American Development Bank, asking that he give most prompt and favorable attention to the request for funds submitted by the Director of the Pan American Sanitary Bureau,

RESOLVES:

1. To thank the Inter-American Development Bank for the financial support it provides to the countries for the development of their animal health programs.

2. To reiterate to IDB the request in operative paragraph 2 of the above-mentioned Resolution VI concerning support for the request of PAHO for funds to help the Pan American Foot-and-Mouth Disease and Zoonoses Centers expand and consolidate the assistance given by them to the countries of the Region.

(Approved at the fifth plenary session,
16 March 1977)

RESOLUTION V

INTER-AMERICAN NETWORK OF ANIMAL DISEASE DIAGNOSIS LABORATORIES

THE X INTER-AMERICAN MEETING,

Having taken note of the report submitted by the Pan American Zoonoses Center concerning the project for an integrated inter-american animal disease diagnosis laboratory (Document RICAZ10/21) in compliance with Resolution XV of the IX Inter-American Meeting on Foot-and-Mouth Disease and Zoonoses Control; and

Recognizing the importance of the project for consolidating and encouraging national animal health programs,

RESOLVES:

1. To approve the main lines of the project as set forth in the report submitted by the Pan American Zoonoses Center (Document RICAZ10/21).
2. To recommend to PAHO that it make arrangements for the Pan American Zoonoses Center to be provided with the additional resources needed to carry out the feasibility study of the project in question.
3. To request the Inter-American Development Bank to lend its financial support in order to enable the study to be carried out.

(Approved at the fifth plenary session,
16 March 1977)

RESOLUTION VI

REGIONAL VESICULAR DISEASE DIAGNOSIS LABORATORY
FOR CENTRAL AMERICA AND PANAMA

THE X INTER-AMERICAN MEETING,

Recognizing that regional project RLA/75/045 of the United Nations Development Program meets the requirements for the operation of a Regional Vesicular Disease Diagnosis Laboratory for Central America and Panama;

Bearing in mind the difficulties which have arisen in regard to the location of the Laboratory;

Realizing the fundamental importance of this laboratory for preventing foot-and-mouth disease in the disease-free area generally and in Central America and Panama in particular; and

Considering that the funds assigned by UNDP for the project in 1976 were not used because the question of location of the Laboratory had not been settled,

RESOLVES:

1. To thank UNDP once again for its continuing support of this project.
2. To recommend to the countries of Central America and Panama that they request UNDP to allow the funds allocated for 1976 to be used in 1977.
3. To request the Governments of Panama and the United States of America, through their Departments of Agriculture and Defense, to speed up the formalities for establishing a maximum security laboratory for the operation of this project.
4. To urge the Governments in the area of the Americas free of foot-and-mouth disease to give the Government of Panama their full support in order that this project may materialize rapidly.
5. To request PAHO to continue to provide support for the execution of the project.

(Approved at the fifth plenary session,
16 March 1977)

RESOLUTION VII

BILATERAL AGREEMENTS ON THE PREVENTION OF FOOT-AND-MOUTH DISEASE

THE X INTER-AMERICAN MEETING,

Bearing in mind the reports submitted on the subject of the Pan American Highway and foot-and-mouth disease (Documents RICAZ10/7, 9, 10, 18 and 23), and in particular the document entitled "Programs for the Prevention of Foot-and-Mouth Disease in Central America and Panama";

Recognizing the importance for the entire Region of binational agreements for the prevention of foot-and-mouth disease and other exotic diseases worked out between the Government of the United States of America and the Governments of Mexico, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama respectively; and

Being aware that the prevention and eradication of any outbreak of foot-and-mouth disease in the parts of the American Continent free of the disease is a problem affecting all the countries of the Region,

RESOLVES:

1. To recommend to the countries signatories of these agreements that they make the utmost effort to achieve and maintain the full development of the activities necessary for achieving their objectives.

2. To recommend to the United States of America, Mexico, the Central American countries and Panama, and to IDB, PAHO, and the Regional International Organization for Plant and Animal Health, that they develop their activities jointly as part of a single policy for the prevention of foot-and-mouth disease and other exotic diseases in the Region.

(Approved at the fifth plenary session,
16 March 1977)

RESOLUTION VIII

SPECIAL FUND FOR ANIMAL HEALTH RESEARCH

THE X INTER-AMERICAN MEETING,

Recognizing the importance of the problems of animal diseases for livestock development in the Americas;

Considering the importance of the research now underway in the Pan American Zoonoses and Foot-and-Mouth Disease Centers and the need to supplement and expand this research in other fields; and

Bearing in mind the interest that exists in a number of countries in contributing with economic and physical resources to the study of specific animal health problems,

RESOLVES:

1. To establish a "Special Research Fund" for the study of specific problems in the field of animal health in the Americas on the basis of voluntary contributions by the countries of the Region.
2. To request PAHO to act as the technical and administrative organ for this Fund, with instructions to prepare within the period of a year a draft constitution and operational procedures for the Fund, to be submitted for consideration by the countries with a view to discussion and approval.
3. To request PAHO to convene in 1977 a meeting of countries contributing resources to this Fund, their representatives to constitute the Governing Council of the Fund, with responsibility for determining the use to be made of the resources obtained.
4. To suggest to PAHO that it consider including in the draft constitution and operational procedures of the Fund the possibility of participation by other public and private institutions.

(Approved at the fifth plenary session,
16 March 1977)

RESOLUTION IX

VESICULAR STOMATITIS

THE X INTER-AMERICAN MEETING,

Bearing in mind the report of the Fourth Regular Meeting of the South American Commission for the Control of Foot-and-Mouth Disease (COSALFA) held in Rio de Janeiro, Brazil, on 10 and 11 February 1977;

Considering that vesicular stomatitis is a disease enzootic in the countries of the Central American Isthmus and in some in the southern part of the Hemisphere and that it interferes with the programs for foot-and-mouth disease prevention, control, and eradication; and

Recognizing the urgent need to strengthen the systems for epidemiologic surveillance of vesicular stomatitis,

RESOLVES:

1. To request the Pan American Health Organization, OIRSA and the Government of the United States of America to draw up a research project designed to provide knowledge of the epidemiology and pathogenicity of vesicular stomatitis with a view to establishing the health measures most effective for its control.
2. To recommend that for the development of this project, consideration be given to the offer made by Mexico to make its installations and equipment of its maximum security laboratory available for studies on vesicular stomatitis.
3. To recommend to the Ministers of Agriculture of the affected countries that they give the support necessary for the efficient development of this research project.

(Approved at the sixth plenary session,
16 March 1977)

RESOLUTION X

COORDINATION BY THE PAN AMERICAN HEALTH ORGANIZATION OF AN INTER-AMERICAN
STUDY ON THE ANIMAL HEALTH SITUATION

THE X INTER-AMERICAN MEETING,

Recognizing that statistical information on the various aspects of animal health is of vital importance in establishing priorities and courses of action;

Considering that it is highly desirable to have this information available, in the regional context, on a uniform and comparable methodological basis; and

Bearing in mind that the present status of survey and sampling techniques offers excellent opportunities and that the Organization has the experience needed for the purpose,

RESOLVES:

1. To request PAHO, as far as its budgetary possibilities will allow, to prepare a project, with the participation of the Pan American Zoonoses Center and the Pan American Foot-and-Mouth Disease Center, and with the cooperation of other regional centers as and when necessary, for a study of the animal health situation.
2. To suggest to PAHO that the project include the budgetary implications of the study and explore the possibilities of outside financing.
3. To recommend to PAHO that once the project is approved and its financing is ensured, the Organization proceed with its implementation in the field.
4. To recommend to the Member Countries that they give PAHO the cooperation it will need by way of personnel and equipment to enable it to carry out the study.
5. To request that as soon as the study is completed, PAHO arrange to publish the information obtained and place it at the disposal of the countries.

(Approved at the sixth plenary session,
16 March 1977)

RESOLUTION XI

COOPERATION OF FAO IN FOOT-AND-MOUTH DISEASE PROGRAMS

THE X INTER-AMERICAN MEETING,

Bearing in mind that Resolution XX of the IV Inter-American Meeting on Foot-and-Mouth Disease and Zoonoses Control and Resolution XXIII of the V Meeting have resulted in joint action by the Food and Agriculture Organization of the United Nations (FAO) and the Pan American Health Organization (PAHO) on the basis of financial support from the United Nations Development Program (UNDP);

Considering that these activities have made it possible to increase the direct assistance provided by the Pan American Foot-and-Mouth Disease Center to the countries for strengthening the foot-and-mouth disease control programs, especially in the field of communication and health education and information systems; and

Considering the need to continue the activities in question so as to consolidate the results achieved,

RESOLVES:

1. To express its appreciation to UNDP, FAO, and PAHO for the joint activities they are developing in the interests of foot-and mouth disease prevention and control.

2. To recommend to PAHO and FAO that they seek the continued support of UNDP in order to consolidate the results achieved through the programs being undertaken within the framework of this collaboration.

(Approved at the sixth plenary session,
16 March 1977)

RESOLUTION XII

PESTICIDES AND CONTAMINATION OF FOODSTUFFS

THE X INTER-AMERICAN MEETING,

Considering the report submitted concerning the importance of regulations for the use of pesticides and the contamination of foodstuffs (Document RICAZ10/11);

Recognizing that comprehensive legislation on the use of pesticides is essential; and

Bearing in mind that this legislation should as far as possible be similar in all the countries of the Region,

RESOLVES:

1. To recommend to the Governments that they draw up and issue comprehensive legislation on the use of pesticides, to include inter alia provisions relating to:
 - (a) The fixing of tolerances for pesticide residues in foodstuffs.
 - (b) Requirements concerning labeling of products, with clear indications concerning toxicity, precautions for use and measures to be adopted in the event of accidents.
 - (c) The compulsory use of adequate equipment and protective devices.
 - (d) Prohibition of the use of pesticides which can accumulate in the organism in fumigating premises where there are people, clothing or foodstuffs; and prohibition of storage and transport of pesticides along with food and other goods for human or animal use and consumption.
 - (e) Obligation to carry out periodic medical examinations of persons working in the handling and administration of pesticides.
2. To recommend the organization of a system of active interchange of information relating to the changes introduced into the legislation on pesticides in the various countries, for the purpose of ensuring the harmonization of the regulations of all the countries of the Region.
3. To request PAHO to cooperate in drafting the legislation in question and in facilitating the interchange of information on the subject.

(Approved at the sixth plenary session,
16 March 1977)

RESOLUTION XIII

PLACE OF THE NEXT MEETING

THE X INTER-AMERICAN MEETING,

Considering the importance of animal health in the production of foodstuffs for human consumption and in the economic development of the countries of the Americas; and

Bearing in mind that Resolution XIX of the XVII Meeting of the Directing Council of PAHO authorized the Director of the Pan American Sanitary Bureau to convene annually a meeting of Ministers of Agriculture, or their representatives to review the programs of the Pan American Foot-and-Mouth Disease and Zoonoses Centers, and to discuss matters of mutual interest,

RESOLVES:

1. To express its satisfaction with the interest shown by the Governments of the Americas at the present Meeting, and to express its thanks for the valuable information presented at the Meeting.

2. To point out once again that it is of capital importance that the Governments of the Hemisphere have the opportunity to hold periodically a broad interchange of ideas and experiences on animal health which will, in turn, benefit the health and development of the peoples of the Region.

3. To thank the Government of Ecuador for its generous offer to host the next Meeting, and to recommend to the Director of the Bureau that he convene the XI Inter-American Meeting, at the Ministerial Level, on Foot-and-Mouth Disease and Zoonoses Control, in the city of Quito in 1978.

(Approved at the sixth plenary session,
16 March 1977)

RESOLUTION XIV

75th ANNIVERSARY OF THE PAN AMERICAN HEALTH ORGANIZATION

THE X INTER-AMERICAN MEETING,

Considering the historic fact that in 1977 the Pan American Health Organization is celebrating the 75th Anniversary of its foundation;

Considering the support given by the Organization over the years to veterinary public health in the Americas; and

Bearing in mind Resolution XXX of the XXIV Meeting of the Directing Council of PAHO, XXVIII Meeting of the Regional Committee of the World Health Organization for the Americas,

RESOLVES:

1. To congratulate the Pan American Health Organization warmly on its 75th Anniversary and on its indefatigable activity on behalf of the health of the peoples of the Americas.
2. To comply with the terms of the above-mentioned Resolution XXX by urging the Member Governments of PAHO to commemorate this outstanding event in a fitting manner.
3. To invite the institutions connected with veterinary public health to participate actively in this commemoration.

(Approved at the sixth plenary session,
16 March 1977)

RESOLUTION XV

EPIDEMIOLOGIC SURVEILLANCE OF RABIES AND EQUINE ENCEPHALITIS

THE X INTER-AMERICAN MEETING,

Having noted with satisfaction the report on the rabies and equine encephalitis surveillance activities, initiated by the Pan American Zoonoses Center in 1969 and 1972 respectively (Documents RICAZ10/26 and RICAZ10/25); and

Recognizing the need to stress the importance of improving the zoonoses surveillance systems in order to help improve the measures for controlling and preventing these diseases,

RESOLVES:

1. To recommend to the Governments that they intensify the efforts being made to strengthen and update their national epidemiologic surveillance services and promote adequate training for the staff involved.
2. To request PAHO, with the help of the Pan American Zoonoses Center, to expand and strengthen direct technical assistance to the countries in regard to the organization and functioning of rabies, equine encephalitis, brucellosis, leptospirosis, salmonellosis, tuberculosis and food poisoning epidemiologic surveillance services at the national level with a view to the steady improvement of those services.

(Approved at the sixth plenary session,
16 March 1977)

RESOLUTION XVI

SOUTH AMERICAN COMMISSION FOR THE CONTROL OF FOOT-AND-MOUTH DISEASE

THE X INTER-AMERICAN MEETING,

Having examined the report of the IV Regular Meeting of the South American Commission for the Control of Foot-and-Mouth Disease (COSALFA), held in Rio de Janeiro, Brazil, on 11 and 12 February 1977;

Considering in particular the importance of defining the criteria for recognizing areas as free of foot-and-mouth disease; and

Bearing in mind the encouraging prospects for inactivated oil-adjuvant vaccines to achieve a more efficient control of foot-and-mouth disease in the countries affected,

RESOLVES:

1. To endorse the resolutions of the IV Regular Meeting of the South American Commission for the Control of Foot-and-Mouth Disease.

2. To recommend to the countries that they study, and consider the possibility of applying, the guidelines on criteria for declaring areas free of foot-and-mouth disease drawn up by the Pan American Foot-and-Mouth Disease Center.

3. To recommend to the Governments of the countries that they cooperate with the Pan American Health Organization in carrying out the project on inactivated oil-adjuvant vaccine prepared by the Pan American Foot-and-Mouth Disease Center.

4. To request the Inter-American Development Bank to consider providing the additional financial help required for the satisfactory implementation of this project.

(Approved at the sixth plenary session,
16 March 1977)

RESOLUTION XVII

SURVIVAL OF THE FOOT-AND-MOUTH DISEASE VIRUS IN
MILK AND OTHER DAIRY PRODUCTS

THE X INTER-AMERICAN MEETING,

Bearing in mind Resolution IV of RICAZ IX which endorses the recommendations of the Scientific Advisory Committee of the Pan American Foot-and-Mouth Disease Center on the problem of the survival of the foot-and-mouth disease virus in milk and milk products;

Being aware of the findings of the research carried out by official organs of the Republic of Argentina using a methodology approved by the Pan American Foot-and-Mouth Disease Center, which did not demonstrate the survival of the foot-and-mouth disease virus in caseine manufactured in accordance with the technology applied by Argentine industry, and the experiments carried out in the Plum Island laboratories in the United States of America, which did demonstrate the survival of the foot-and-mouth disease virus in caseine; and

Considering that it continues to be a matter of great importance to pursue this line of research in respect of milk products, including caseine,

RESOLVES:

To request the Pan American Foot-and-Mouth Disease Center with the technical and economic cooperation of the interested countries to continue the research into the possibility of survival of the foot-and-mouth disease virus in milk and milk products.

(Approved at the seventh plenary session,
17 March 1977)

RESOLUTION XVIII

PAN AMERICAN HIGHWAY - DARIEN GAP

THE X INTER-AMERICAN MEETING,

Considering that the Pan American Highway project has been a goal desired by the peoples of the Hemisphere for more than half a century, as expressed in international pacts now in force (Pan American Highway Convention, Buenos Aires, 1936), and declarations by the Chiefs of State (Punta del Este, Uruguay, 1967), and in conferences and congresses sponsored by the Organization of American States;

Bearing in mind that the so-called Darién Gap segment in Panama and Colombia constitutes the final obstacle to the achievement of this goal and the consequent establishment of overland communications between North, Central and South America;

Recognizing that the construction of this segment of the Pan American Highway will incorporate a vast production zone into the national economy of Panama and Colombia in particular and of the Hemisphere in general; and

Considering that, according to the statements by the experts participating in the current Meeting, control and eradication of foot-and-mouth disease can be achieved through the application of effective modern techniques and methods,

RESOLVES:

1. To recognize the importance of completing the Pan American Highway with the construction of the Darién segment in Panama and Colombia.
2. To urge the Governments of the Americas, particularly those of the United States of America and Colombia, to speed up the programs already begun for the control and eradication of foot-and-mouth disease in the Colombian segment of the Pan American Highway and arrange for its construction as soon as possible.
3. To recommend that in the meantime the construction work in Panama, which is already well advanced, be continued, and to express full confidence that the Government of Panama will take the appropriate steps to protect the environment and the ecological systems, in the interests of the inhabitants of the area and of the national economy, introducing stringent surveillance, inspection and quarantine measures to ensure that the countries of Central and North America will be kept free of foot-and-mouth disease and other exotic diseases.

4. To recommend to the Governments of Colombia, the United States of America, and Venezuela that they develop a joint project designed to intensify foot-and-mouth disease control and eradication in the territories of Colombia and Venezuela.

(Approved at the seventh plenary session,
17 March 1977)

IN WITNESS WHEREOF, the President of the Meeting and the Director of the Pan American Sanitary Bureau, Secretary ex officio, sign the present Final Report in the English and the Spanish languages, both texts being equally authentic.

DONE in Washington, D.C., this seventeenth day of March, nineteen hundred and seventy seven. The Secretary shall deposit the original texts in the archives of the Pan American Sanitary Bureau and shall send copies thereof to the Governments of the Organization.

Dr. Carmelo Contreras Barboza
President of the Meeting
Representative of Venezuela

for Dr. Héctor R. Acuña
Director of the
Pan American Sanitary Bureau
Secretary ex officio of the Meeting