

SERIES OF PAPERS, CONCLUSIONS AND RECOMMENDATIONS FROM TECHNICAL EVENTS

NO. A2/GY-87-001

ISSN-0253-4746

IICA



PROCEEDINGS
OF
RESANTILLAS IV
THE FOURTH MEETING OF CARIBBEAN DIRECTORS OF ANIMAL HEALTH
AND
LABANTILLAS II
THE SECOND MEETING OF CARIBBEAN DIRECTORS
OF
VETERINARY DIAGNOSTIC LABORATORIES

IICA
PRRET-
A2/GY/
87-001

GUYSUCO MANAGEMENT TRAINING CENTRE
OGLE, EAST COAST DEMERARA, GUYANA

APRIL 8-10, 1987

The Inter-American Institute for Cooperation on Agriculture (IICA) is the specialized agency for agriculture of the Inter-American System. The Institute was founded on October 7, 1942 when the Council of Directors of the Pan American Union approved the creation of the Inter-American Institute for Agricultural Sciences.

IICA was founded as an institution for agricultural research and graduate training in tropical agriculture. In response to changing needs in the hemisphere, the Institute gradually evolved into an agency for technical cooperation and institutional strengthening in the field of agriculture. These changes were officially recognized through the ratification of a new Convention on December 8, 1980. The Institute's purposes under the new Convention are to encourage, promote and support cooperation among the 29 Member States, to bring about agricultural development and rural well-being.

With its broader and more flexible mandate and a new structure to facilitate direct participation by the Member States in activities of the Inter-American Board of Agriculture and the Executive Committee, the Institute now has a geographic reach that allows it to respond to needs for technical cooperation in all of its Member States

The contributions provided by the Member States and the ties IICA maintains with its twelve observer countries and numerous international organizations provide the Institute with channels to direct its human and financial resources in support of agricultural development throughout the Americas.

The 1987-1991 Medium Term Plan, the policy document that sets IICA priorities, stresses the reactivation of the agricultural sector as the key to economic growth. In support of this policy, the Institute is placing special emphasis on the support and promotion of actions to modernize agricultural technology and strengthen the processes of regional and subregional integration.

In order to attain these goals, the Institute is concentrating its actions on the following five programs: Agrarian Policy Analysis and Planning; Technology Generation and Transfer; Organization and Management for Rural Development; Marketing and Agroindustry; and Animal Health and Plant Protection.

These fields of actions reflect the needs and priorities established by the Member States and delimit the areas in which IICA concentrates its effort and technical capacity. They are the focus of IICA's human and financial resource allocations and shape its relationship with other international organizations.

The history of IICA in the Caribbean is relatively recent. Haiti was the first member and the Institute opened office there in 1972. The Guyana Office was opened in 1975. The most recent member countries are Antigua and St. Vincent which were admitted to the Institute during the Inter-American Board of Agriculture Meeting held in Ottawa in S. 1987.

**PROCEEDINGS
OF
RESANTILLAS IV
THE FOURTH MEETING OF DIRECTORS OF ANIMAL HEALTH OF THE CARIBBEAN
AND
LABANTILLAS II
THE SECOND MEETING OF DIRECTORS OF VETERINARY DIAGNOSTIC LABORATORIES
OF THE CARIBBEAN**

1987
REPUBLICA DE VENEZUELA
MINISTERIO DEL INTERIOR
SECRETARIA DE GUBERNACIONES

**GUYSUCO MANAGEMENT TRAINING CENTRE
OGLE, EAST COAST DEMERARA, GUYANA
APRIL 8-10, 1987**

**IICA OFFICE IN GUYANA
1987**

NO. A2/GY-87-001

ISSN-0253-4746

~~BV-011711C.1~~

~~BV-011714C.2~~

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87-001

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A P P R O V E D A G E N D A

WEDNESDAY, APRIL 8, 1987:

- 08:00 hrs: Registration
- 08:30 hrs: Election of Officers
- Chairman
- Vice-Chairman
- Rapporteur
- 09:00 hrs: O P E N I N G C E R E M O N Y
- Chairman's Opening Remarks
- Speakers
- Welcome Address: Dr. Steve Surujbally
President
Guyana Veterinary
Association
- Dr. Franz C. Alexander
Country Representative
IICA Office in Guyana
- Dr. Hector Campos
Deputy Director
IICA Animal Health
Programme
- Main Address: Hon. Dr. Patrick L. McKenzie
Senior Minister in the
Ministry of Agriculture
- 09:30 hrs: C O F F E E B R E A K
- 10:00 hrs: Confirmation of Agenda
- 10:05 hrs: IICA Report (1985-1986) and Animal Health
Programme 1987 -
Dr. Franz C. Alexander
Animal Health Specialist
IICA
- 10:30 hrs: AUTOSIM I - PLASA 2000 -
Dr. Hector Campos
- 11:00 hrs: Country Reports:
- Barbados
- Dominica
- Grenada
- 12:00 hrs: L U N C H E O N

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- 13:30 hrs: Country Reports:
- Haiti
- Jamaica
- St. Lucia
- Suriname
- 15:30 hrs: B R E A K
- 16:00 hrs: Country Reports:
- Trinidad & Tobago
- Guyana
- 17:00 hrs: Bluetongue Studies
- Professor Paul Gibbs
University of Florida

THURSDAY, APRIL 9, 1987

- 08:00 hrs: Animal Health Information and Surveillance Systems
- Feasibility Study and Draft Report
- Dr. Franz C. Alexander
- DIE Report
- Dr. Pedro Acha
Chairman, World Zoosanitary Information
System (DIE)
- 10:30 hrs: C O F F E E B R E A K
- 11:00 hrs: Management of *A. variegatum* in the Caribbean -
Feasibility Study Report (IICA/USDA)
- 12:00 hrs: L U N C H E O N
- 14:00 hrs: Chairman - Opening Remarks

World Veterinary Laboratory Diagnosticians
- Dr. Michael Bedoya
Animal Health Specialist, IICA Brasil
Secretary/Treasurer - World Association of
Veterinary Laboratory Diagnosticians

Participant's Report - World Congress, Holland,
1986
- Dr. Edward Cazabon, Trinidad & Tobago
- 15:00 hrs: Laboratory Reports:
- Barbados
- Haiti
- Jamaica
- Trinidad & Tobago
- Guyana

Discussions - Recommendations

FRIDAY, APRIL 10, 1987

08:30 hrs: Visit to Mon Repos Complex

12:00 hrs: L U N C H E O N

- 14:00 hrs: - Recommendations
- Final Report
- Closing Ceremony

SUMMARY OF PROCEEDINGS

PRELIMINARY OPENING ADDRESS

Dr. Franz C. Alexander, IICA's Regional Animal Health Specialist, welcomed the delegates and observers to RESANTILLAS IV/LABANTILLAS II as he called the meeting to order. He paid tribute to the support given to IICA by Regional Governments and to Guyana in particular for its hospitality and cooperation as host country.

ELECTION OF OFFICERS

Dr. Vincent Moe, out-going Chairman of Trinidad and Tobago, presided over the election of officers. Elected were:

- Dr. Lennox Applewhaite, Guyana, Chairman
- Dr. Trevor King, Barbados, Vice-Chairman
- Dr. George Grant, Jamaica, Rapporteur.

OFFICIAL OPENING

Delegates, Observers and Members of the Diplomatic Corps were officially welcomed by the new Chairman, Dr. Lennox Applewhaite.

A special welcome was extended to:

1. Dr. Ptolemy Reid, Veterinarian and former Vice-President of the Cooperative Republic of Guyana;
2. Hon. Dr. Patrick L. McKenzie, Senior Minister in the Ministry of Agriculture in Guyana;
3. Hon. Vibert Parvatan, Minister in the Ministry of Agriculture;
4. Mr. Fitz Dorway, Permanent Secretary, Ministry of Agriculture, Guyana;
5. Mr. Lazaro Cabezas Gonzalez, Dean of the Diplomatic Corps;
6. Mr. Roderick Rainford, Secretary General, CARICOM;
7. Dr. Pedro Acha, Chairman of the World Zoo-Sanitary Information System;
8. Dr. Michael Bedoya, Secretary/Treasurer, World Association of Veterinary Laboratory Diagnosticians; and
9. Dr. Hector Campos, Deputy Director of Animal Health, IICA.

ADDRESSES

- I. Dr. Steve Surujbally, President, Guyana Veterinary Association:

Dr. Surujbally welcomed delegates on behalf of the veterinary fraternity of Guyana. He reminded delegates of the upcoming joint Congress of the Canadian/Caribbean/Commonwealth Associations which will be held in 1988 and to be hosted by Guyana.

- II. Dr. Franz C. Alexander, IICA Representative in Guyana:

In his welcome address, Dr. Alexander, on behalf of IICA, made mention of the recent appointment of fellow veterinarian Dr. Patrick McKenzie as the Senior Minister in the Ministry of Agriculture for Guyana. He acknowledged the Minister's contributions to the regional veterinary fraternity. He also paid tribute to the support given to IICA by GUYSUCO and Ministry of Agriculture personnel in staging RESANTILLAS IV/LABANTILLAS II. He presented IICA's policies and programmes as general information and as background for the meetings to be held.

- III. Dr. Hector Campos Lopez, Deputy Director of Animal Health, IICA:

In his welcome address, Dr. Hector Campos made reference to the progress of various animal health programmes initiated by IICA in the Region. He made special mention of the recently instituted combined Animal Health and Plant Protection Services. These services were aimed at more effective utilization of limited available resources and the movement towards upgrading Animal Health services in Member Countries.

- IV. Hon. Dr. Patrick L McKenzie, Senior Minister in the Ministry of Agriculture, Guyana:

The Minister, who gave the main opening address in welcoming the delegates, referred to Drs. Ptolemy Reid and Pedro Acha as the fathers of Veterinary Science in Guyana and Latin America respectively because of the historical role each man had played in the development of veterinary health services. He took note of the veterinary kinship existing between Guyana and the Region in general.

He challenged the delegates to take note of the various problems affecting the region as a whole and the struggles of individual countries to attain national identity without losing dignity. He further stressed

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that there must be a real and increased awareness by animal health specialists and other technicians in the region re the development and use of appropriate technologies. He argued that it was not just simply a matter of knowing that these exist but that these technologies be adopted and improved where necessary to the benefit of the region. Finally, he expressed his gratitude to IICA for its significant help in assisting Guyana in its current livestock development plan. He invited delegates to use the facilities of his Ministry to make themselves at home in Guyana.

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PRESENTATIONS**a. IICA's REGIONAL PROGRESS REPORT**

Dr. Alexander referred to the budgetary constraints leading to the combined meetings of RESANTILLAS AND LABANTILLAS being held biennially instead of annually. He stressed the importance of the new Animal Health Information and Disease Reporting System. IICA, he said, was sending out quarterly "feed back" reports to Member Countries and that there was a sort of lag in the submission of monthly reports by Member Countries. Some were hesitant in forwarding reports on their animal health status for a variety of reasons. He hoped for a correction of this situation. Recognition was given to PAHO and individual veterinarians who contributed to the publication by way of articles.

The limitations of the present information system were noted and he mentioned that funding through IDRC was made available to CARICOM for a feasibility study to develop an Animal Health Information System to be implemented by IICA and North Carolina State University, USA.

The feasibility proposal for the management of the Tropical Bont Tick had been presented in Barbados in March. This feasibility study was conducted by USDA and IICA resulting from a number of recommendations by Caribbean veterinarians.

Emergency Funds under IICA's Animal Health and Plant Protection Programme are to provide Dominica with support for that country's emergency project in tick eradication.

The Bluetongue survey for Central America is to be extended to the Caribbean Area through establishment of sentinel herds in Jamaica, Trinidad and Tobago and Barbados. Participating countries for the proposed Pirbright serological survey were being asked to observe necessary protocol and schedule of this programme. With respect to the Screwworm Eradication Project in Jamaica for which IICA/Government of Jamaica feasibility studies had already been conducted, FAO's support was being requested for implementation of the project. A Caprine Arthritis Encephalitis (CAE) sero prevalence survey is being proposed for the Caribbean as soon as antigen becomes available. A prevalence status survey of tick borne diseases in the area is being conducted in Guyana. Test supplies were obtained from Texas A&M University.

Several workshops and seminars such as those on Tick Eradication Measures in Puerto Rico for IICA Member Countries and their English-speaking neighbours, a Laboratory Equipment Maintenance Course in Barbados and Animal Health Courses in Haiti were held in 1985.

COINSA II was held in April 1985 in Brasilia with appropriate and relevant resolutions passed.

IICA reconfirmed its support for REPAHA by providing lectures. It supported and participated in the Veterinary Public Health and Tourism Seminar sponsored by PAHO and the FAO Workshop on Veterinary Services in the Caribbean held in Jamaica. In addition, dairy herd health lectures in Barbados, Guyana and Suriname, the Joint Caribbean-Canadian Veterinary Congress in Barbados, the sponsorship of a Caribbean representative to the World Veterinary Diagnostic Conference in Amsterdam, the training of veterinary auxiliary personnel in Barbados were given IICA's support.

Finally, AUTOSIM emergency disease response planning training methodology is now available in English and is soon to be promoted in the Caribbean.

b. AUTOSIM I - PLASA 2000

Dr. Hector Campos, Deputy Director of Animal Health of IICA made a presentation on the structure and working plan of the new Animal Health and Plant Protection Programme of IICA with special reference to the Animal Health Emergencies Training System (AUTOSIM) and the programme areas and goals of the Animal Health Plan for the Americas for the year 2000 (PLASA 2000).

He mentioned that the five areas of concentration of IICA's Animal Health and Plant Protection Programme are:

1. Strengthening institutional structures for animal health and plant protection;
2. Economic evaluation of pest and disease losses;
3. Advisory assistance to countries to help overcome health barriers to international trade;
4. Strengthening health protection and emergency systems; and
5. Seeking private agricultural sector involvement in animal health and plant protection programmes.

He explained the plan of action for all of those areas of concentration.

Regarding training for animal health emergencies he stated that the United States-Mexico Foot and Mouth Prevention Commission had developed a training system called AUTOSIM which is available to all countries. A course/seminar on the use of such a system will be arranged for the Caribbean countries during the third semester of 1987.

He recommended that Animal Health Directors of the Caribbean Countries follow up the guidelines provided by the Animal Health Plan for the Year 2000 which is a useful tool for designing and implementing new actions and activities in the animal health field.

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RESANTILLAS IV

COUNTRY REPORTS 1986-1987

I. BARBADOS - Dr. Trevor King

The Veterinary Service was able to maintain a reasonable level of activities despite the problems of restriction on fund allocations, inadequate laboratory space and inefficient laboratory equipment maintenance. IICA is currently helping with the latter through training courses for laboratory personnel.

Some of the major activities involved in during the period under review were the institution of mycoplasma techniques, dairy cattle investigation to determine the possible aetiology of an observed hyperthermic and low fertility syndrome, and the investigation of lymphosarcoma in pigs. The increased submission of abattoir specimens, the detection of high porcine parvovirus antibodies in a swine herd and the determination of *Oestrus ovis* as the aetiology of observed rhinitis in goats were the other highlights. Continued participation in the current Bluetongue survey and the usual assistance given neighbouring Small Islands in upgrading their veterinary services were maintained.

II. DOMINICA - Mr. Errol Harris

The work of the veterinary unit has increased with the new thrust in meat, egg and broiler meat production towards self-sufficiency. Veterinary work is approximately 95% food animals. There has been a move from clinical to preventive husbandry. Also, the period has seen an increase in banana production with concomitant decrease in livestock population. An increase in the incidence of face mange in sheep has been reported. There has been a serious problem with the threat of exotic diseases from neighbouring islands. There was a recent outbreak of *Amblyomma variegatum* which has been placed under control with IICA's support.

Finally, the illegal slaughtering of animals and the lack of central control over biologicals continue to be major areas of concern.

III. GRENADA - Dr. Buxton Nyack

The livestock sector is being given some semblance of priority. There are no large-scale organised livestock farms at the present time and attention is being given to this. The Island continues to enjoy freedom from the major exotic diseases excepting rabies which is responsible for severe economic losses in the livestock industry. The anti-rabies immunisation campaign continues. The mongoose population continues on the increase despite the on-going entrapment programme.

Epidemiological surveillance is of major concern. Grenada is still without quarantine facilities. The entry of suspected commercial quantities of disease-infected meat posed a problem. The opening of the new Airport has served to improve surveillance efforts. Attempts are being made to bring the meat inspection services under the umbrella of the Veterinary Services. At present, the Veterinary Services comprise a one-man unit but plans are ahead to improve this undesirable situation.

IV. HAITI - Comments made by Dr. Hector Campos

The swine repopulation project is ongoing with multiple distribution centres being set up. This programme has run into some difficulties in terms of pig breed acceptance by the population and feed and management problems. There were no major animal health problems reported.

V. JAMAICA - Dr. Lynden Bryan

Professional staff shortage and financial constraints curtailed functions. Of thirty eight (38) veterinarians registered to practice in the country only thirteen (13) are on the official establishment.

The country has achieved modified accredited area status for tuberculosis. Intensified work on Brucellosis continues in three parishes in the drive to achieve modified free status for the country.

Improved working conditions with completion of thirteen (13) clinic/office complexes, operations of revolving drug fund and revolving motor vehicle loan fund for veterinary staff should improve field services.

Bovine Fertility Programme, Meat Inspection (Export) Programme, Herd Health Programmes continue to receive special attention.

Implementation of Screwworm Eradication Programme is awaiting technical and financial assistance from USDA and Mexico-American Commission on Screwworm.

Tests on CAE were retarded because of unavailability of suitable antigen.

Emergency Animal Disease Preparedness Exercises continue annually.

VI. ST. LUCIA

Delegate absent. No report.

VII. SURINAME - Dr. Robert Lieuw-a-Joe

This country faces tremendous political difficulties in terms of the local fighting, foreign exchange problems, lack of transport and a brain drain which have adversely affected the delivery of veterinary services which is almost at a standstill.

Brucellosis has been established on two farms and avian tuberculosis on twenty-six. The vampire bat eradication programme has been severely restricted due to difficulty of veterinary personnel to enter strife-torn areas.

VIII. TRINIDAD & TOBAGO - Dr. Vincent Moe

The main thrust of the Division's activities was directed towards increasing the profitability of livestock and poultry production through the reduction of losses due to animal diseases.

Major activities included Rabies prevention and control. Vampire bat biting was significantly reduced with nil incidence in certain areas and sporadic in others. St. Patrick was identified as the main vampire bat county. Rabies vaccination of livestock formed an integral part of the control. There was only one case of rabies in 1986, a significant decline from 10 cases reported in 1985.

The poultry surveillance programme was proving very effective. Inefficient management was identified as well as certain disease problems such as CRD, Bronchitis, Endoparasitism, Infectious Bursal Disease and Aspergillosis.

Tuberculosis testing of 2990 dairy cattle and 89 buffalo were all negative. Abattoir lymph node samples from pigs were considered positive for *M. bovis* by the Pan-American Zoonosis Centre.

The Reproductive Herd Health Programme was very effective and would be expanded. An outbreak of Equine Influenza was reported.

Clinical veterinary service to farmers continued throughout the country. Technical cooperation support for IICA's Feasibility Study for Management of the Tropical Bont Tick and Animal Health Information Systems was given and endorsed.

IX. GUYANA - Dr. Lennox Applewhaite

Considerable improvement in the veterinary manpower was achieved. Some 14 new veterinarians joined the services. This has not led to a concomitant improvement in the organisational structure and ability of the services to execute programmes. However, a new national regional system has been implemented but which unfortunately has served to increase the bureaucracy through which veterinarians must report.

Serious problems of transportation in terms of lack of vehicles and mileage ceilings for veterinary personnel have surfaced. Shortage of veterinary equipment and other support resources have also been serious problem areas. The IICA-supported dairy development programmes were initiated. Cases of malabsorption syndrome in chickens, bovine leukosis, ovine trypanosomiasis and tick fevers were investigated. The ongoing TB and Brucellosis surveillance programme continued to make progress.

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BLUETONGUE CARIBBEAN PROJECT

by

Dr. Paul Gibbs (University of Florida)

This programme was initiated in 1981 and was designed to look at the Sero-prevalence and possible arthropod vectors of Bluetongue infection in the area and to relate the results of these to the current world-wide situation. Support for the project is being given by OIRSA, OICD, IICA and the Universities of Wisconsin and Florida.

The question of the constraints on trade versus the clinical manifestation of this disease entity was discussed. The clinical manifestations, pathological lesions, differential diagnosis, mode of transmission, virulence, virus isolation techniques and typing and risk of outbreaks were reviewed in the presentation. The intriguing question of the possible movement and origin of this viral aetiology was considered. Finally, it was reemphasised that no clinical manifestation of this disease has been observed or reported in the Caribbean Area. Sentinel herds are currently being surveyed in several of the Caribbean countries as part of the project activity.

OIE REPORT

by

Dr. Pedro Acha

Dr. Acha presented a report on the OIE Animal Health World Information System. He introduced the subject with a description of the purposes and objectives of the Office International des Epizooties (OIE), "the World Veterinary Organisation" with headquarters in Paris, France. A series of documents were distributed and discussed. Emphasis was placed on the "International Zoo-sanitary Code" that guides the veterinary services world-wide for the trade and sanitary control of animals and their products. A description was made of the publication "World Animal Health" (3 vols.) that contains statistical information on animal disease outbreaks on the List A of emergency communicable diseases and the "Zoo-sanitary situation and methods of control of animal diseases" which provides a country by country description of the animal situation in the preceding years. Dr. Acha also described the procedures for immediate and monthly reporting of significant disease outbreaks to the OIE and distributed the Manual of "GUIDELINES" and copies of the Standard Reporting Forms presently used by the 108 Member Countries of this Organisation. He finished his presentation by encouraging the delegates to the RESANTILLAS IV/LABANTILLAS II to join the OIE in order to have direct benefits of the services of this organisation and to bring into perspective the Animal Health Programmes of the Caribbean Region into the World Forum.

ANIMAL HEALTH INFORMATION AND SURVEILLANCE SYSTEM FOR THE CARIBBEAN

Dr. Alexander gave an update on the feasibility study being undertaken in animal health data monitoring systems for the Caribbean Region. The main objective of this study is that of developing an animal health data monitoring system for the Caribbean Region. This study deals with recommendations appropriate to each country as well as strategies for integrating this regionally. The preliminary draft of this study was completed and Member Countries would be requested to give an early response to this study following its presentation to CARICOM and IDRC.

INTER-AMERICAN COMPENDIUM OF VETERINARY PRODUCTS

by
Dr. Hector Campos

This compendium deals with the registration of veterinary drugs, biologics and other products. He stated that there is currently a deep concern about the paucity of product registration information from Caribbean territories. It is also believed that registration units either do not exist or are relatively few in this Region. Support will be given to Member Countries in order to implement or strengthen these units where necessary. It is hoped that Caribbean countries will participate in the next issue of this very useful compendium.

MANAGEMENT OF THE TROPICAL BONT TICK IN THE CARIBBEAN Feasibility Study Report (IICA/USDA)

Dr. Alexander gave a slide presentation reviewing the features of the problem associated with the tick *Amblyomma variegatum* and related diseases Heartwater and Dermatophilosis. He reviewed briefly the events leading to the USDA/IICA feasibility study and its presentation at a technical workshop in Barbados from March 17-19 arranged in conjunction with the CARICOM Secretariat. He outlined the four resolutions proposed at that meeting.

Dr. Dave Anderson, USDA, emphasised the concern of the hemisphere because of the presence of *Amblyomma* species such as the Gulf Coast Tick which had been shown experimentally to transmit Heartwater. He also commended the inputs from the Caribbean Veterinary Services in the feasibility study.

The meeting was concerned about delays in possible funding and implementation of country projects. A film on Heartwater was shown.

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LABANTILLAS II

WORLD ASSOCIATION OF VETERINARY LABORATORY
DIAGNOSTICIANS UPDATE

Dr. Bedoya who is the current Secretary/Treasurer gave a brief update on the Association whose main objectives are those of promoting exchange of information relative to animal diseases, establishment of uniform diagnostic techniques and their improvement, development of new techniques and the improvement of training, facilities and individuals engaged in the diagnosis of animal diseases. He invited participants to be members of this organisation. The present Secretariat is c/o University of Guelph, Ontario, Canada.

IICA/PANAFTOSA SWINE FEVER HEMISPHERIC
SURVEILLANCE SYSTEM

by

Dr. M. Bedoya

Delegates were given a brief report on the progress of this system which was developed in November last year. The history of ASF into the Caribbean area was outlined. It was shown that the potential risk of ASF introduction and the resultant adverse economic effects on all countries were real problems. He stated that there were considerable benefits accruing from the cooperation of various countries and international organisations with respect to the eradication of this disease in the Region. Furthermore, he pointed to the serious mistake in mobilising the Veterinary Services of countries only in times of emergencies and the tendency towards budgetary reduction for the maintenance of these services after great effort in laboratory training and necessary equipment was achieved. In an effort to maintain the necessary vigilance, this surveillance system for swine diseases was developed jointly by IICA/PAHO utilizing the PANAFTOSA experience and the IICA infrastructure.

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**REPORT ON THE IV INTERNATIONAL SYMPOSIUM
OF VETERINARY LABORATORY DIAGNOSTICIANS**

by
Dr. E.P. Cazabon

This Symposium was held in Amsterdam, the Netherlands from June 2-6, 1986 with Dr. E. Cazabon representing Caribbean countries through IICA's sponsorship. Some forty-eight (48) countries participated with approximately 230 presentations being made. Laboratory Management and Diagnosis of Fish Diseases were considered of special interest to the Caribbean situation. The geographical, climatological, political and financial constraints affecting laboratory operations were noted. Recommendations by the Caribbean delegate were that requesting from IICA or other appropriate international agencies support in ascertaining veterinary laboratory requirements and by so doing making recommendations re the appropriate laboratory service requirements for each country and secondly to look into the question of relevant continuing education for veterinary diagnosticians in the area through sabbatical leave with attachment to appropriate institutions in developed countries.

VETERINARY DIAGNOSTIC LABORATORY REPORTS

I. BARBADOS - Dr. Stephen St. John

The Barbados Veterinary Laboratory has continued to function well within strict limitations of space. Case submissions continue to rise, demonstrating confidence in the reliability of results from disciplines of Bacteriology, Morphologic Pathology (gross and microscopic), Serology, Haematology, Parasitology and Serum Biochemistry. The introduction of fees for tests on companion animals has affected only the canine necropsy submissions.

The staff situation is stable with most technicians/technologists trained to degree level. This allows for the high degree of flexibility essential for efficient functioning of small laboratories.

Presently one major problem is the rigidity of government financing which caters poorly to the idiosyncracies of laboratory equipment supplies.

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II. DOMINICA - Mr. Errol Harris

Routine clinical programmes are now being integrated with farmer's education programmes. Several surveys in Anaplasmosis, Babesiosis, parasitism and face mange disease of sheep were undertaken. Other surveys are being planned for Oestrus ovis infestation on the Island. A drug revolving scheme now operative among farmers aims at facilitating a greater effectiveness in drug availability and procurement.

The capability of the diagnostic services was tested recently during the Amblyomma variegatum outbreak. The illegal entry of meat and meat products continues to be a problem for veterinary personnel. Veterinary import/export permits are now made mandatory. The setting up of a drug registration and control unit is being given active consideration. The Livestock and Plant Protection Division is helping in monitoring quarantine regulations.

III. HAITI - Dr. David Anderson

The diagnostic laboratory is now non-functional. However, through the efforts of USDA/APHIS this unfortunate situation is being corrected. It is envisaged that a new and well equipped laboratory will be ready in about six months' time.

IV. GRENADA - Dr. Buxton Nyack

The Diagnostic Services face serious limitations due to the acute lack of veterinary personnel and a properly equipped laboratory. Plans are however ahead for the setting up of a well equipped diagnostic laboratory with capabilities in basic areas.

Surveys were conducted on Bluetongue, Anaplasmosis, Bovine Tuberculosis, Brucellosis and Bont Tick population. These surveys will continue.

V. JAMAICA - Dr. George Grant

The laboratory continues to maintain its capabilities in undertaking basic diagnostic work in support of the field activities. However, its functions have been curtailed by financial, personnel and material constraints. The laboratory is grossly understaffed in terms of both veterinary specialists and laboratory technologists. In addition, the inefficient and costly servicing of laboratory equipment has been an area of serious concern. The laboratory has been able to maintain its level of activities through a series of improvisations. During the period under review the laboratory has processed approximately 150,000 specimens.

Laboratory personnel have continued to participate in various projects and surveys sponsored by international organisations such as FAD, IICA and Project Hope during the period under review. There is at present a joint project with the Jamaican Bureau of Standards re the impending takeover of this particular service by the Veterinary Services. Finally, the current personnel problem could be partially resolved in the short term by the secondment of veterinary specialists through international agency support.

VI. TRINIDAD & TOBAGO - Dr. Edward Cazabon

The Laboratory with a staff of thirty two (32) including the two (2) Veterinarians continues to be the competent authority for the performance and interpretation of animal tests and disease diagnosis and research. In addition, a laboratory animal colony is maintained by the Division. All major areas of laboratory operations continue to be maintained. Approximately 30,000 tests were performed during the two year period under review. There were noticeable increases in processing of poultry specimens.

Notifiable diseases diagnosed were Enzootic Bovine Leukosis, Bovine Piroplasmiasis, Rabies, Tuberculosis and Equine Influenza. One hundred and fifty (150) other un-notifiable disease conditions were also diagnosed.

Finally, there have been several improvements and additions to the physical structure of the laboratory complex.

VII. GUYANA - Dr. Herman Reid

The Veterinary Diagnostic Services have experienced mixed fortunes over recent times. While training for several staff personnel took place, two senior staff members - clinical pathologist and the parasitologist - resigned. Fortunately, the pathologist is available on a part time basis and in-house training is being given to two recent graduates in these areas. Diagnostic techniques were improved in several areas. The extremely short shelf-life of blood serum chemistry reagents received by the laboratory continues to be a problem.

All bovine sera submitted to this laboratory were tested negative for Brucellosis. On the other hand, outbreaks of Chronic Respiratory Disease (CRD), a malabsorption syndrome and Newcastle Disease played havoc in the poultry industry resulting in severe losses.

Other disease outbreaks investigated were a mysterious death syndrome in Kunchen ducklings, Paralytic Rabies in cattle, Bovine Leukosis, Dermal Lymphosarcoma, Canine Distemper and Thallium Sulphate poisoning of birds.

Several research surveys are slated to take place in the immediate future.

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RECOMMENDATIONS OF RESANTILLAS IV

RECOMMENDATION NO. 1

ANIMAL HEALTH DATA MONITORING SYSTEMS

The fourth meeting of Directors of Animal Health of the Caribbean - RESANTILLAS IV

Recognising the progress made in the feasibility study on Animal Data Monitoring Systems for the Caribbean promoted by CARICOM, funded by IDRC and implemented by IICA:

RECOMMENDS:

1. that the document be submitted to participating countries for scrutiny, evaluation and analysis to facilitate speedy implementation of relevant proposals wherever applicable;
2. that IICA be requested to coordinate the implementation of this project according to recommendations from the participating countries;
3. that participating Governments be requested, with the assistance of IICA, to promote training in Veterinary Epidemiology and Economics since such training is essential to the application of Veterinary Medicine to livestock production systems and cost-effective programmes;
4. that participating Governments be requested, with the assistance of IICA, to provide training to technical support personnel prior to the implementation of Animal Health Data Monitoring Systems in order to ensure that there is a cadre of trained technical support personnel to assist in the implementation of such systems.

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RECOMMENDATION NO. 2

WORLD ZOOSANITARY INFORMATION SYSTEM OF THE INTERNATIONAL OFFICE OF EPIZOOTICS (OIE)

The Fourth Meeting of Directors of Animal Health of the Caribbean - RESANTILLAS IV

In view of the benefit afforded countries by membership of the OIE in protecting their valuable livestock industries and in the promotion of Trade and considering the access to the world animal health information system and assistance available to provide funds for information programmes by the OIE:

RECOMMENDS:

that the Governments of all CARIBBEAN countries become members of the OIE at the earliest opportunity.

RECOMMENDATION NO. 3

ANIMAL HEALTH REGULATIONS AND INTERNATIONAL TRADE

The fourth Meeting of Directors of Animal Health of the Caribbean - RESANTILLAS IV

In order to promote and encourage Regional and International Trade in livestock and livestock products:

RECOMMENDS:

that Governments be guided by the OIE International Zoosanitary Code in order to ensure the harmonisation of the regulations on the movement of animals and animal products adopted by Member Countries.

RECOMMENDATION NO. 4

INTER-AMERICAN COMPENDIUM OF VETERINARY PRODUCTS

The Fourth Meeting of Directors of Animal Health of the Caribbean - RESANTILLAS IV

Having reviewed the Progress Report on the preparation of the Inter-American Compendium of Veterinary Products conducted by IICA and the Virginia Polytechnic Institute:

Considering the importance of having the information on Registered Veterinary Products of the Countries of the American Hemisphere:

RECOMMENDS:

1. that all Caribbean countries be encouraged to provide IICA with the necessary information on registered veterinary products for the Compendium;
2. that IICA's assistance be requested for the formulation of appropriate legislation governing registration and control of veterinary products within those countries where such legislation does not exist.

RECOMMENDATION NO. 5

MANAGEMENT OF THE TROPICAL BONT TICK IN THE CARIBBEAN

The Fourth Meeting of Directors of Animal Health in the Caribbean - RESANTILLAS IV

Having reviewed the Draft Report of the Technical Workshop on the Management of the Tropical Bont Tick held in Barbados - March 17-19, 1987:

RECOMMENDS:

1. support in principle for the four Resolutions contained therein;
2. that Resolution II be amended to reflect PHASE I of the Project so as not to prejudice immediate funding of country projects;
3. that the Agencies and Organisations responsible for the Feasibility Proposal for the Management of the Tropical Bont Tick in the Caribbean be commended.

RECOMMENDATION NO.6

EPIDEMIOLOGY OF BLUETONGUE

The Fourth Meeting of Directors of Animal Health of the Caribbean - RESANTILLAS IV

Considering the benefits towards Trade already realised from previous Studies on Bluetongue Disease in the Caribbean;

Recognising the support being given by the Organisations IICA, OIRSA, OICD, AVRI, Pirbright, University of Florida to the Regional Bluetongue Programme:

Cognisant of the expansion of Bluetongue Studies to the countries of Central America:

RECOMMENDS:

1. Participating Governments support IICA's Programme Studies in the Epidemiology of Bluetongue in the Caribbean;
2. That the Supporting Agencies and Organisations be thanked for their assistance in implementing such Studies.

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RECOMMENDATIONS OF LABANTILLAS II

RECOMMENDATION NO. 1

THE DEVELOPMENT OF VETERINARY DIAGNOSTIC LABORATORY SUPPORT SERVICES

The Second Meeting of Directors of Veterinary Diagnostic Laboratories of the Caribbean - LABANTILLAS II

Taking into consideration the fact that successive reports on the Delivery of Laboratory Support Services by Member Countries presented during the LABANTILLAS II Meeting suggest serious concerns re the deterioration in the efficiency of these support services due mainly to the multiple problems of continued chronic shortage of Specialist Personnel through the inability to recruit and retain these said personnel, the difficulties experienced in securing adequate essential and basic supplies, the increasing severe financial constraints and the problems of laboratory equipment maintenance:

RECOMMENDS:

1. A system of periodical preventive maintenance service for laboratory equipment in the Caribbean Region with the support of IICA and other International Agencies be urgently established;
2. Potential areas of excellence in laboratory diagnosis be established by each participating country and that these be further developed with the support of IICA and other such Agencies;
3. A system aimed at expediting the procurement of basic and essential laboratory supplies be developed through specific agreements with IICA and other such relevant International Agencies;
4. A continuing education training programme be implemented for Regional Laboratory Personnel through specific requests and agreements with IICA and other such Agencies;
5. Short-term consultancies and exchange programmes in specialist areas experiencing acute shortage of personnel be immediately instituted for Regional Veterinary Laboratories through specific requests and agreements with IICA and other relevant Organisations.

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CLOSING CEREMONY

Dr. Alexander thanked all the delegates for their support and participation and noted that IICA will support where possible the Recommendations of RESANTILLAS IV and LABANTILLAS II.

The Honourable Minister of Agriculture, Dr. Patrick L. McKenzie thanked the delegates for choosing Guyana for this conference and added that he was pleased that the Conference had addressed some of the major issues affecting animal health delivery systems in the Region.

Dr. Lynden Bryan moved the vote of thanks on behalf of the participants and read a formal vote of appreciation to the Government of Guyana for the hospitality and support extended to make the Conference a success.

VOTE OF APPRECIATION TO THE GOVERNMENT OF GUYANA

The Fourth Meeting of Directors of Animal Health of the Caribbean - RESANTILLAS IV and the Second Meeting of Directors of Veterinary Diagnostic Laboratories - LABANTILLAS II

Considering the gracious hospitality extended to all participants:

WISH TO EXTEND their sincere gratitude to the Government and people of the Co-operative Republic of Guyana.

Mrs Elsie Croal, Acting Chief Agricultural Officer, made presentations of VANCERAM ware to all participants on behalf of the Ministry of Agriculture.

The Chairman, Dr. Lennox Applewhaite thereafter declared the Conference closed.

ADDRESS

by

Dr. Steve Surujbally
President, Guyana Veterinary Association

Mr. Chairman
Cde. Ministers in the Ministry of Agriculture
Secretary General of the Caribbean Community
Members of the Diplomatic Corps
Colleagues
Guests

It is indeed an honour and a distinct pleasure to welcome, on behalf of the Guyana Veterinary Association, our overseas colleagues and local participants to this Conference.

We recognise that the Caribbean now is paying a lot more heed to its livestock assets than before, and we Veterinarians who are the custodians of the health and well-being of our wards were perhaps the prime influencers of this emphasis. Within this context therefore, it is an especial pleasure to welcome colleagues whose duties and activities, and in some cases whose entire working lives, represent such an important tile in the mosaic of the total improvement of the Region's Livestock Industry.

And having said that I dare say that I could take my seat and preen on a job easily completed. But surely that would not suffice; nor is it because I want to keep the Honourable Minister waiting - I hope that the Secretary of the GVA is taking notes - No, rather I would like this welcome to be more specific - and there is a reason for this.

Not so long ago - in December last year to be exact - during the Caribbean/Canadian/Commonwealth Veterinary Convention, our colleagues from the Caribbean stood monolithically and with single purpose behind the Guyana Veterinary Association in the latter's quest to host the 1988 Convention in spite of the fears that Guyana had only one S to offer in the seemingly mandatory four included in Sea, Sand, Surf and Sun - as if these factors are the immutable prerequisites for the success of a Convention. Our Caribbean colleagues spoke in glowing terms of Guyana's hospitality. Our colleagues emphasised the myriad of production-oriented projects that could be seen here in Guyana - not lastly in our dairy self-sufficiency thrust. Our colleagues recorded our honesty in denying our chances to hold the Convention when we couldn't and asserting ourselves when we could.

Our colleagues lauded the fact that the GVA was strong and vibrant and expanding and capable. It is because of this confidence, this trust, this recognition from our peers within and without the Caribbean that we extend a very special welcome to you now that you are here. Allow us to translate this welcome into showing you - no, showing off to you, sharing with some of our achievements (and perhaps even some of our follies) during whatever little time you have available when you are not at the Conference table.

I have no doubt that the organisers of this Conference have an efficient Secretariat that will look after your routine needs. Please, however, feel free to call on members of the Guyana Veterinary Association should you need any extra assistance that would make your stay here more pleasurable.

Again I wish you, on behalf of the GVA, an extremely enjoyable and beneficial Conference; and I say to those of you who are here for the first time - welcome to Guyana, and to those who have returned and in some cases returned and returned - welcome back.

WELCOME REMARKS

by

Dr. Franz C. Alexander

IICA Country Representative/Animal Health Specialist

On behalf of the Inter-American Institute for Cooperation on Agriculture (IICA), it is my pleasant duty and privilege to welcome you to the Opening of the IV Meeting of Directors of Animal Health of the Caribbean and the II Meeting of Veterinary Laboratory Diagnosticians of the Caribbean and to thank you for your support.

The Inter-American Institute for Cooperation on Agriculture - IICA - is happy to sponsor this meeting. This would not have been possible here without the gracious acceptance of the Government of Guyana to host this meeting and I wish to express my sincere thanks for this generous gesture and the steadfast cooperation received at all stages.

Today we are in the presence of none other than the Senior Minister in the Ministry of Agriculture, Dr. Patrick McKenzie, himself a Veterinary Colleague and who in so many previous international fora such as this has represented his country with distinction and set an example of leadership of the highest calibre. Indeed, he attended the very first meeting of Directors of Animal Health under IICA's Animal Health Programme which was held in Barbados in 1981, the fruits of which are still being reaped.

It was his suggestion, I believe, to consider holding the meeting at this venue in order to provide participants with an example of Guyana's long-lasting charm and conviviality. I would also like to express my sincere thanks to the Chairman of GUYSUCCO, Mr. Harold Davis, who made it possible to have this reunion here.

The history of IICA in the Caribbean is relatively recent. The Guyana Office was opened in 1975, thirty-three years after the Institute was founded. It is the specialised agency for agriculture of the Inter-American System, having 29 Member Countries of the Hemisphere, and is organised into four Zones. In the Caribbean Zone, there is Jamaica, Haiti, Dominica, St. Lucia, Grenada, Barbados, Trinidad & Tobago, Suriname and Guyana.

The Inter-American Board of Agriculture composed of the Ministers of Agriculture or their Representatives meets every two years to approve policy guidelines and the budget, effecting this duty through a Preliminary Executive Committee composed of twelve Member States elected on the principle of rotation and geographical distribution. Guyana is presently a member of this Executive Committee.

2.

At its meeting in Uruguay in 1985, the Board authorised the General Directorate to appoint a Group of External Experts who, together with Member States, would evaluate the Medium Term Plan and adjust it to the changing needs of Member Countries and the present conditions of IICA.

The Group of Experts recommended that activities be concentrated in a small number of Programmes of high technical impact, reflecting important areas of agricultural development and rural well-being and for which sufficient operating capacity already existed for developing needed efforts at the national and multinational levels.

IICA attached high priority to the multinational dimension of technical cooperation.

IICA's purpose is:

- to encourage, promote and support the efforts of the Member States to achieve agricultural development and rural well-being;
- to develop the agricultural sector as a major source of economic growth, as a supplier of foodstuffs for domestic consumption and as the major source of foreign exchange;
- to intensify modernisation and increase production efficiency in the agricultural sector;
- to pursue regional integration in recognition of the political desire for cooperation.

In order to achieve these goals, the Institute is concentrating its action on the following five Programmes:

1. Agricultural Policy, Analysis and Planning
2. Technology Generation and Transfer
3. Organisation and Management for Rural Development
4. Marketing and Agro-Industry
5. Animal Health and Plant Protection.

IICA's Animal Health Programme began in 1980. It is significant that it is now combined into one Programme with Plant Protection designed to continue to solve the problem of diseases and pests that have a negative impact on agricultural production, productivity and marketing especially in the international market.

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3.

It will cooperate with the countries to strengthen national institutions, expanding their capacity and effectiveness for preventing the entry of exotic diseases and pests, controlling those that are present and reducing the risks of spread.

It has achieved some notable success, not least of which has been its role for the Caribbean - the eradication of African Swine Fever from Haiti, the Bluetongue Serological Survey and the recent Feasibility Study for the Management of the Tropical Bont Tick. The latter was just presented in Barbados at a technical meeting called by CARICOM, the result of Ministerial Recommendations promoted by participants at RESANTILLAS III held in Trinidad & Tobago in 1984.

IICA/Guyana is also involved in contractual arrangement with CARICOM for an IDRC-funded Animal Health Information System Feasibility Study shortly to be concluded with Dr. Wayne Corbett and Associates from the School of Veterinary Medicine, North Carolina State University.

It is in this context that the Directors of Animal Health and Senior Laboratory Diagnosticians meet to review IICA's Animal Health Activities, to highlight the policy, interests and concerns of your countries and to direct the future course.

It is a glorious opportunity befitting the responsibility of your offices.

The Institute is exceedingly grateful for the efforts you have all made to be here and expresses its sincere thanks. May I extend my best wishes to the participants for a successful sharing of information and thoughtful deliberation that hopefully will lead to fruitful consensus and renewed vigour for the tasks that lie ahead.

ADDRESS

by

Hon. Dr. Patrick L. McKenzie
Senior Minister in the Ministry of Agriculture

Chairman

Colleagues of the Head Table

Delegates

Dr. Reid, Adviser to the President and who we consider to be
our Father of Veterinary Medicine in Guyana

Members of the Diplomatic Corps

Dr. Pedro Acha often called the Father of Veterinary Science
in Latin America

Colleagues

Distinguished Guests and Friends

It is always a pleasure to meet with old friends, make new ones and to renew acquaintances and so it is with a deep sense of veterinary kinship that I welcome you to Guyana and to this sugar plantation filled with our history and its special place in the development of this nation, this plantation which is resplendent in its greenery and flowers even at this time when we are experiencing an unusually long dry spell.

For those who have not been here before and who may be coming from a winter that refuses to go away, we say to you, take off your jackets and your ties, roll up your shirt-sleeves and enjoy while you work, the north east trade winds as you have never felt them anywhere else before and I hope that at the end of your stay you would have recognised that by holding this conference here you have successfully traded a sandy beach for the best tasting fish and largest prawns in the world; that you will have met with the friendliness of our people which is a characteristic of the Caribbean and that you would have seen a nation systematically and purposefully attempting to overcome its difficulties imposed by the world economic conditions, without losing ground to the dignity and self-confidence of its people.

We are not in the city of Georgetown and since I have never heard of someone giving a key to the village of Ogle, let me offer instead the facilities of the Ministry of Agriculture to anyone or group who would wish to see one or more of the Development Projects in which we are involved.

It is in this spirit that I welcome this RESANTILLAS IV and LABANTILLAS II meeting to Guyana.

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Mr. Chairman, these are serious times in which we meet; serious times for each of our nations, our Region and the world. This body of Animal Health Directors; of Laboratory Directors and of Specialists, is well aware of the efforts in an attempt to meet the protein needs of our Caribbean people. They are also aware that the motivation has taken many forms, from shortage and high prices of poultry meat in some countries, unacceptably high import costs of milk, beef, cotton and feed in others, and yet to surplus unutilized pork in others due to religious and other preferences including trade difficulties.

In each of our countries the awareness of providing a higher protein level in our diet is not lost, it is the steadfastness with which we hold our ground that is sometimes the question.

For our part in Guyana one of our objectives is the attainment of national self-sufficiency in meat, milk and eggs and the pursuance of nutritional self-sufficiency and food security.

Among the strategies identified are:

- i) the maintenance of attractive market prices and in the case of the beef industry, aim for the maximum exports from coastal production.
- i) utilization of improved technology for feeding with emphasis on the use of by-products from the rice, edible oil and sugar industries as well as the fishing and livestock industries.
- i) provision of incentives for the production of raw materials for the feed industry.

The systematic and purposeful approach of which I spoke earlier is already bearing fruit in some areas. In 1983 we produced 3 million gallons of milk and have been doing so for several years prior to that year. This was in the face of a projected national demand of 12 million gallons. Three years later we introduced our National Dairy Development Programme and are now producing over 5.5 million gallons of milk annually.

In the poultry industry, traditionally, we imported oilier hatching eggs and some 60 percent of the value of the poultry feed. This expenditure in foreign exchange resulted in a significantly reduced availability of poultry. Like in the case of milk, we utilized the strategies identified in our eight Development Plan and I am now happy to say that during this year a local company with Regional financial assistance will begin the production of the eggs we imported. Perhaps equally important will be the commercial production of soybeans by another Company having successfully completed the search and pilot production phases of this crop which is the most costly ingredient imported for our poultry feed.

There are other programmes involving beef, buffalo, ducks and pigs which in time will unfold. Mr. Chairman, there is another objective of our agricultural development plan which I wish to draw to your attention and with which I believe your meeting will be in accord and that is:

"the incorporation into the national consciousness of an awareness of the need to apply appropriate technology to the agricultural production process".

I am informed that at this meeting you will discuss the Bluetongue disease studies carried out in some of the CARICOM Countries including Guyana and included in those discussions will be the availability of the technology for continuing this work and the implications for the movement of animals throughout the Caribbean territories.

Similarly your discussions on the dreaded *Amblyomma variegatum* tick will no doubt focus on the latest technological advancement in this area.

Our Directors of Animal Health and Directors of Laboratories, indeed all our professionals and technical personnel, must see themselves as disciples to assist our Caribbean people in achieving this national consciousness of the need to use appropriate technology.

To do this I suggest that attending conferences such as these must be more than just meeting of old friends, it must be more than an opportunity to escape the routine of our technical life. We must absorb new information, follow up and try out on our new technology, recognising that today in each of our laboratories, we have more improved equipment than Louis Pasteur had 107 years ago when he identified the role of micro-organisms in fermentation. We have more knowledge than Robert Koch had 101 years ago when he proved the germ theory in his now famous work on Anthrax. While these achievements were over 100 years ago, some of us in this room were born already when Waksman in 1942 showed beyond a doubt, what we now take for granted, that antibiotics could play a tremendous role in curing infectious diseases.

It is not enough to know that the technology exists, it is not enough to know that we can ask and receive the ready-made results of that technology.

Unless we constantly seek to adapt these new and appropriate technologies, we run the risk of the gap between the developed and developing countries being widened further and history will say that all this happened while we were managers of our country's laboratories and animal health subsector.

It may be beyond our capabilities at this time to do genetic engineering or nuclear biology but it is not beyond our capabilities to attend to the perinatal problems thus leading to increases in birth rates and decreases in mortality through the diligent application of science in the area of breeding, of vaccines, sanitation and feeding; it is not beyond our capabilities to increase productivity through a concerted tick control or tuberculosis eradication programme.

We need the will; we need a plan and we need dedicated Directors of Animal Health and Directors of Laboratories to implement such a plan.

I wish to congratulate IICA in its assistance to Guyana in the implementation of our mutually agreed programme and more specifically in the Dairy Development subsector; where dairy farms with improved pastures, utilizing solar powered fencing and milking machines have been established. In addition, the Herd Health and Fertility Programme has been of significant assistance.

Mr. Chairman, I wish you success in your deliberations during the next three days and hope that your stay in Guyana will be most pleasant.

ANIMAL HEALTH REPORT
by
Franz C. Alexander

The last RESANTILLAS/LABANTILLAS Meeting was held in Trinidad & Tobago in 1984 and COINSA II in Brasil in 1985. Recognising the fiscal constraints under which the Institute is obliged to function, the Director General has approved these meetings to be held alternately every two years.

The IICA Animal Health Programme for the Caribbean Area has been carried out under four (4) main activities which incorporate the Recommendations of Directors of Animal Health of Member Countries arising from RESANTILLAS, LABANTILLAS and COINSA meetings.

Activity 1: Animal Health Information and Disease Reporting

Since 1981, animal health data on a monthly basis has been requested of Member Countries. The Institute has prepared a quarterly feedback summary report with lead articles emanating from the Area or particularly relevant to it. These quarterly reports have been completed up to 1985. Thanks are extended to those Veterinarians who have submitted articles for publication and to the Pan-American Health Organisation, whose articles have also been featured.

Formats were designed in an attempt to obtain uniform reporting. These have proved irrelevant due to marked differences between countries and more time-consuming in preparation, so that emphasis has been placed on utilizing established in-country reports. Some Member Countries have been exemplary, such as Grenada.

Trinidad & Tobago has developed a most comprehensive disease reporting format with difficulties being experienced only with delays in compilation. Jamaica has provided regular information. Some countries, recognising the limitations of the system, have been increasingly reluctant to participate and some data have been supplied from laboratories or annual reports, inconsistently.

The objective of the activity was primarily to develop national animal data-monitoring systems for specific diseases of interest and to measure sources leading to highest economic losses. The weaknesses of the present systems had to be exposed and the feasibility of establishing a good methodology tried. The Ministers of Agriculture of CARICOM, having endorsed this need, obtained funds through IDRC for this Study

and engaged IICA who, through a contract with Dr. Wayne Corbett and his Epidemiological Team from the School of Veterinary Medicine, North Carolina State University, will complete this Study by May 8, 1987. Visits to all CARICOM Member States will be completed and the Study hopes to identify proposals and options for the development of an effective methodology.

The Region has from time to time received animal disease information through IICA's Animal Health Programme. A Hemispheric Monitoring System for Swine Diseases has been promoted by Dr. Michael Bedoya - IICA/Brasilia. The Caribbean is also participating in this System which will also be discussed at this meeting.

Activity 2: Project Development and Implementation

Following Recommendations at RESANTILLAS III and COINSA II, IICA has been in the forefront of the development of a Regional Project for the management of *Amblyomma variegatum* in the Eastern Caribbean. Indeed, the USDA and IICA undertook the first Reconnaissance Mission in 1982 following the confirmation of Heartwater by French Workers in Guadeloupe in 1980. Professor Michael Burridge - University of Florida - brought together workers at the World Conference in Kissimmee, Florida in 1983 and undertook a Mission with USA, French and Dutch workers confirming the presence of Heartwater in Antigua and Marie Galante and the distribution of the Tropical Bont Tick in the Caribbean. Professor Burridge presented this data to us at RESANTILLAS III.

Recommendation II on *Amblyomma variegatum* approved that Directors of Animal Health would recommend to Ministers of Agriculture to:

1. support the most cost-effective strategy for eradication of this dangerous tick vector from the Caribbean Region; and
2. give their full and united support to the development of a Regional Eradication Project;

This Recommendation, together with a similar Resolution proposed by the Commonwealth Veterinary Association, was submitted simultaneously to CARICOM for the attention of the Ministers of Agriculture.

A proposal for determining the best cost-effective strategy was developed following initiatives by IICA, Professor Burridge, the Government of Antigua, with support from the University of Florida, Nor-am Chemical Co. and BAYER Ltd., Germany. Comparative trials were designed to take place in Antigua using Amitraz and Flumethrin. The trials, if funded, would have been managed by a graduate student from the University of Florida in fulfilment of a Master's degree.

Following further Recommendations of the First Meeting of CARICOM Veterinarians held in Jamaica in 1985 with strong support from USDA, a workshop was hosted by the Commonwealth of Puerto Rico on Tick Eradication Measures, sponsored by IICA, at which 25 Caribbean Veterinarians participated.

A Regional Project Proposal was then prepared by IICA and the Director of Animal Health brought together interested parties to a Meeting in Washington near the end of 1985, which led to the formation of a Feasibility Study Group made up of USDA (OICD, ARS, APHIS) and IICA during 1986. The Feasibility Study had been urged by Recommendations from the National Cattlemen's Association and the American Veterinary Medical Association to USDA and USAID.

This culminated in the presentation of a Feasibility Proposal by Team Leader Dr. Roger Drummond in Barbados March 17-19, 1987 and its preparation as a Project Proposal by IICA.

The Directors of Animal Health of the Caribbean provided essential data for this Study.

The Antiguan Trial was shelved following the decision that the Feasibility Study should precede.

The Feasibility Study Presentation recently held in Barbados was arranged by CARICOM and four (4) Resolutions were approved:

1. Establishment of an Amblyomma Programme Council
2. Establishment of a Pilot Project for the Tropical Bont Tick
3. Convening of a Donor's Conference
4. For Countries undertaking Tropical Bont Tick Emergency Control Activities.

During 1985 and 1986, IICA supported the Government of Dominica in measures to eradicate the tick from the village of Bellevue Chopin. Since September, 1985, the tick has not been observed in this area and mandatory spraying has ceased since July, 1986.

Regrettably, a new focus of infestation was discovered during November 1986 in the Woodford Hill Area in the North-East of the Island. The Veterinary Authorities promoted control measures immediately, but the outbreak is possibly much more widespread. Additional assistance was requested and I am pleased to report that EMERGENCY Funds have been approved by IICA for this purpose during 1987.

St. Lucia, meanwhile, had received OAS funds to undertake preliminary tick control measures following two studies undertaken by Dr. Glen Garris and Professor Martin Hugh-Jones sponsored by IICA. Reports were encouraging that further spread had been limited and the incidence of Dermatophilosis was greatly reduced. Recently, St. Lucia has requested assistance from the FAO to determine the present distribution of the tick and to assist with control measures.

BLUETONGUE

During 1985, in support of Recommendation III (1984), attempts were continued in Barbados and Trinidad & Tobago to isolate viruses and to identify the transmitting midges. Drs. Paul Gibbs and Ellis Greiner from the University of Florida provided this expertise. Culicoides specimens and blood samples were sent from these two countries to Pirbright Virus Research Institute but results were negative.

Meanwhile, the University of Florida, Colorado workers and OICD, USDA developed a project for Central American countries in agreement with OIRSA and the Government of Costa Rica. IICA has agreed to contribute to this project for the Caribbean and contract arrangements have been established with the University of Florida to undertake sentinel herd studies in Jamaica, Barbados and Trinidad & Tobago. (Dr. Paul Gibbs will elaborate further).

It is pleasing to report also that supplies have been made available by Pirbright to support a three-year serological study in six Caribbean Countries, monitoring yearling animals. Barbados, using the agar-gel immuno-diffusion test, has kindly agreed to test 100 samples from each country four times per year and to forward positive sera to Pirbright for serotyping. The objective is to continue to determine the prevalent serotypes in the Caribbean over this period of time and so monitor them. Participating countries are ardently requested to observe the protocol and schedule.

SCREWWORM

A Screwworm project for Jamaica was pursued vigorously in the hope that the USA/Mexico Screwworm Commission would supply irradiated flies and funds could be obtained to execute the project. The Government of Jamaica has subsequently requested technical assistance from the FAO. The status of this project is expected to be reported at this meeting.

Trinidad & Tobago reported that a graduate student was undertaking preliminary base-line studies required for development of a control or eradication project.

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Further studies have not been developed in Guyana or Suriname, the other Member Countries in which the pest is a problem.

The opportunity was taken in Barbados, following a proposal by the University of Florida, to conduct tests for CAE using stored goat sera from the previous Bluetongue survey. Preliminary results indicated that the few samples tested were negative. Jamaica is known to have imported animals with CAE and has a control programme. St. Lucia had imported goats subsequently and requested further tests by the Barbados Laboratory. A supply of antigen was not then available. As CAE is widespread in North America, the Eastern Caribbean should complete further tests and be possibly identified as a disease-free area.

Serological samples from the Bluetongue Survey were also shipped to the Guyana Veterinary Diagnostic Laboratory where tests are being conducted for prevalence of tick-borne diseases. Dr. Gale Wagner, Texas A&M University, was contracted to supply the Fluorescent Antibody Slide test antigens and appropriate controls.

Activity III: Manpower Development and
 Inter-Institutional Cooperation

COINSA II was successfully held in April/May, 1985 in Brasilia with full participation from the area save for Guyana, whose attendance was cancelled by the Government at the last minute.

Dr. Scotland from St. Lucia acted as Chairman of the Tick and External Parasite Committee, with IICA's Animal Health Specialist as Secretary.

Resolutions were approved on:

1. Participation of the Livestock Sector in the Planning and Development of Animal Health Programmes
2. Mass Communications in Animal Health
3. Diagnostic and Research Laboratories in Animal Health
4. Quarantine and Emergency Programmes
5. Coordination of Technical International Cooperation in Animal Health
6. Ticks and Other External Parasites

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7. Screwworm
8. Bluetongue
9. Inter-American Compendium of Registered Veterinary Products
10. Animal Health Plans for the Americas by the Year 2000 - PLASA 2000
11. Inter-American Information and Epidemiologic Surveillance System on Animal Health
12. Votes of Thanks and Expression of Appreciation to Government of Brasil, Dr. Frank Mulhern and Dr. Reuben Lombardo.

RESANTILLAS IV, originally scheduled for 1986, was postponed following the Director General's directive.

A Seminar/Workshop for Veterinarians on Tick Eradication Measures was held in Puerto Rico for IICA Member Countries and English-speaking Neighbours from September 2 to 6, 1985. The Workshop was fully supported by personnel from USDA - VS - ARS and the Puerto Rico Tick Eradication Campaign.

A Workshop on Laboratory Equipment Maintenance was successfully held in Barbados from November 11 to 15, 1985. Spectrophotometers, microscopes, pH meters and balances were the main instruments covered. Expertise was provided by Mr. Thomas Phillips of Perkin-Elmer Co., Puerto Rico, Mrs. Joan Hope and Mr. Cecil Persaud from the University of Guyana, and Messrs. Earl Browne, Ian Brown, Cecil Best and Mrs. June Roache from Barbados. Certificates were presented to 30 participants.

In Haiti, the Government of Haiti/USAID/USDA/IICA Animal Health Surveillance Project was given support. Lectures on Basic Epidemiology, Information Systems and Tick Toxonomy, Identification and Diseases were given to 30 Veterinary Auxiliaries during August 27 to 30, 1985 and on November 4, lectures on IICA's Role in Laboratory Diagnostic Capability, Reference Centres for the Hemisphere and Laboratory Administration and Planning were given to Laboratory Technicians.

Each year, second-year students at REPAHA, Guyana are given lectures over a period of three weeks in Reproductive Physiology and Infertility Problems. In 1985, there were 19 students, in 1986, 18, and in 1987, there were 15 students.

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The PAHO Veterinary Public Health Meeting held in Jamaica May 24 to 29, 1986 was attended. The theme was Veterinary Public Health and Tourism and a presentation was made on Animal Production Factors affecting Tourism.

IICA accepted the invitation to support a FAO workshop in Jamaica September 22 to 26, 1986 on Veterinary Services for the Caribbean.

Arrangements were made for Dr. David Ley, Poultry Pathologist from North Carolina State University to act as IICA consultant at the request of the Government of Suriname, but visits have been deferred up to the present time.

Lectures have been delivered to Dairy Farmers on Herd Health in Guyana, Barbados and Suriname in support of seminar/workshops promoted by IICA's Animal Production Specialist. These lectures covered Control of Rabies, Tuberculosis, Parasites, Mastitis, Calf Management and Fertility.

IICA supported the Canadian/Caribbean Veterinary Congress hosted by Barbados in December, 1986. The Director of Animal Health, Dr. Hector Campos-Lopez attended:

Presentations were provided by Dr. Frank Mulhern on African Swine Fever in Haiti - 2 years later, Dr. K. Urquhart on Quarantine Measures in relation to the Caribbean and by the Animal Health Specialist - Progress Report on the Feasibility Study on Management of *Amblyomma variegatum* in the Caribbean.

IICA also supported the participation of four (4) Guyanese Veterinarians.

IICA promoted the participation of Dr. Edward Cazabon, Veterinary Pathologist, Trinidad & Tobago at the seminar of World Veterinary Laboratory Diagnosticians held in Amsterdam, Holland during 1986 as Representative of the Caribbean. He has agreed to provide a report at this meeting.

The Government of Barbados requested IICA to support training in quarantine measures for auxiliary veterinary personnel, especially those with responsibilities at ports of entry. This request fitted part of Recommendation I on Sanitary Defence Systems.

Training material was explored, e.g. from the USDA System, but considered in need of amendment for use in the Caribbean as the System is different and available personnel fewer. In the Caribbean, regulations governing livestock and livestock products restrict importations to those holding permits and licences, so that discretion is avoided by other than the Director of Veterinary Services.

Note was taken of the exercises in emergency disease response capability held in Jamaica and sponsored by the PAHO. Caribbean Veterinarians, in collaboration with the PANAFTOSA Centre, have also produced a video presentation with dialogue highlighting the constant danger of entry of exotic diseases. This has been distributed throughout the Area.

The Foot-and-Mouth Disease USA/Mexico Commission has produced AUTOSIM - a response planning training exercise which has become available in English. It is proposed to promote this training during August of this year and Dr. Campos will elaborate further during this meeting for your consideration.

Activity IV: Herd Health and Fertility - Guyana

The objective is to support the development of dairy units in Guyana with herd health and fertility control practices under Veterinary supervision. The priority livestock activity is the National Dairy Development Programme, which is also supported by a project conducted by IICA's Animal Production Specialist.

During 1985, a course was held for nine Veterinarians in the technology for Bovine fertility examinations and record-keeping. Materials and supplies in support of fertility examinations, parasite and mastitis control programmes were provided. Herd fertility examinations were used to provide in-service veterinary training and to introduce farmers to defining production goals, record-keeping and undertaking control measures especially for Bovine Tuberculosis, Parasites and Mastitis.

Twenty-five dairy herds were identified in Regions 2, 3 and 4 and examinations begun. Assistance in training in aspects of infertility and breeding soundness evaluation for bulls in AI was also provided.

During 1986, examinations were continued in Regions 2 and 4 mainly in support of IICA's project. Farms were identified and assigned to Veterinarians to undertake disease control practices. Response has been inconsistent and dependent upon particular interested Veterinarians only.

The Government of Guyana has begun a Field Services Unit which might be considered as an embryonic epidemiological and disease control unit.

A national project is proposed to assist development of this unit and to incorporate farmer instruction services in appropriate herd health practices.

COUNTRY REPORT - DOMINICA
by
Mr. Enrol Harris

Government has clearly stated its objective of self-sufficiency in livestock and livestock products. In order to achieve these goals, Veterinary Personnel have adopted a posture aimed at educating leading livestock producers towards the tremendous and admirable challenge of self-sufficiency.

In order to close the wide gap that exists between small scale subsistence livestock production and a market oriented small livestock businessman, the Veterinary Personnel have teamed up with husbandry personnel to provide farmer education.

This approach has also been necessary since a substantial number of veterinary problems on Dominica are associated with husbandry inadequacies.

The Veterinary Personnel now see livestock as a business for the small farmer and are moving him into economic production while providing insurance in the form of health back up.

Routine clinical programmes are run throughout the islands in the day and on several evenings actual farmer education is provided.

The Veterinary Section has seen the value of giving laboratory technicians exposure to field work. This has been made possible with the help of the United States Peace Corps who provide short lab replacements.

In fact, livestock teams incorporate part-time use of personnel in the much larger crop science and extension section of the Division who have had specialised livestock training.

This team effort is extended to IICA who has come in support of a division idea of zero grazing for small ruminants and extended the effort to a much wider field scale effort.

These efforts in husbandry have in no way reduced the veterinary aspects of the work; in fact it has ensured direct relevance to field production. The work being done in the lab on Internal Parasites reflects this and the operation of a drug revolving fund now in place for the last four years has ensured the availability of low cost drugs in appropriate packages to small farmers.

The lab also provides back up diagnostic work: both Anaplasmosis and Babesiosis which are often picked up and may cause mortality among pure bred cattle and local animals when moved into coastal herds from isolated inland areas which were free of Ana and Piroplasmosis.

The field mobilization which occurred for the eradication of *Amblyomma variegatum* in the south demonstrates also the ability of the Veterinary Services.

The recent outbreak of *Amblyomma variegatum* in another district to the north has demonstrated quick response of a prepared system.

Within weeks Government had legally created the new quarantine area. Staff was recalled from leave for survey work while IICA demonstrated a quick response to urgently requested back up both with finance (which was limited in the Division at the time) and with personnel. Dr. F. Alexander with his suggestion of farmer to farmer advice, cooperative farmers from the eradicated area carrying the message to farmers showing resistance in the new area showed that while the man in the field had his nose to the job, IICA experience could be of immense value.

There is also lab work aimed at increasing farmer returns by working on the so called "Face Mange" of sheep which appears to be of fungus origin. Fungal cultures have been done and identified but unfortunately over the Christmas season carelessness on the part of a watchman resulted in dogs killing off all experimental animals. Animals are again being collected to carry on the work.

The Nazal Bot Fly identified some 10 to 15 years ago is also coming in for special attention.

The concern is that with the increase of the population now being encouraged there is every likelihood to do the same to pests and diseases population if vigilance is not exercised.

On the matter of vigilance, plant protection personnel are presently being used for livestock inspection at the ports. In an effort to make the present system efficient, Livestock has offered to assist with two additional workers to adequately cover the ports of entry. It is proposed that the entire staff will be trained in aspects of animal health. It should be noted that Dominica's neighbours, the Islands of Guadeloupe, north and Martinique, south, have quite a different approach to several diseases and pests. Because of the tremendous cost in money and personnel to the Dominican taxpayer and those of other countries who have helped the Island in the eradication of introduced exotic diseases and pests over the last few years have forced the Veterinary Section to exercise the letter of the law when breaches to the import control regulations occur. Many a pest has found its way back on the plane out of Dominica when possible or to a permanent or premature sleep.

Few merchants, if any, for some years now will attempt to land animal products without all the required veterinary documentation to do so and this includes import permits prior to placing orders and veterinarian certification at country of origin.

The Unit is involved in feed trials using local materials and the team effort in the area of feed extends to the Honourable Prime Minister who has brought in promising grass species for trial on the Island.

Coordination between the Ministries of Health and Agriculture is good and while there is no ante mortem examination of animals, post mortem examination is encouraged for animals sold. Here too, Public Health Inspectors play their part in this coordinated exercise.

As may be expected with this level of alertness, diseases not previously identified have been picked up, for instance, Leptospirosis in dogs.

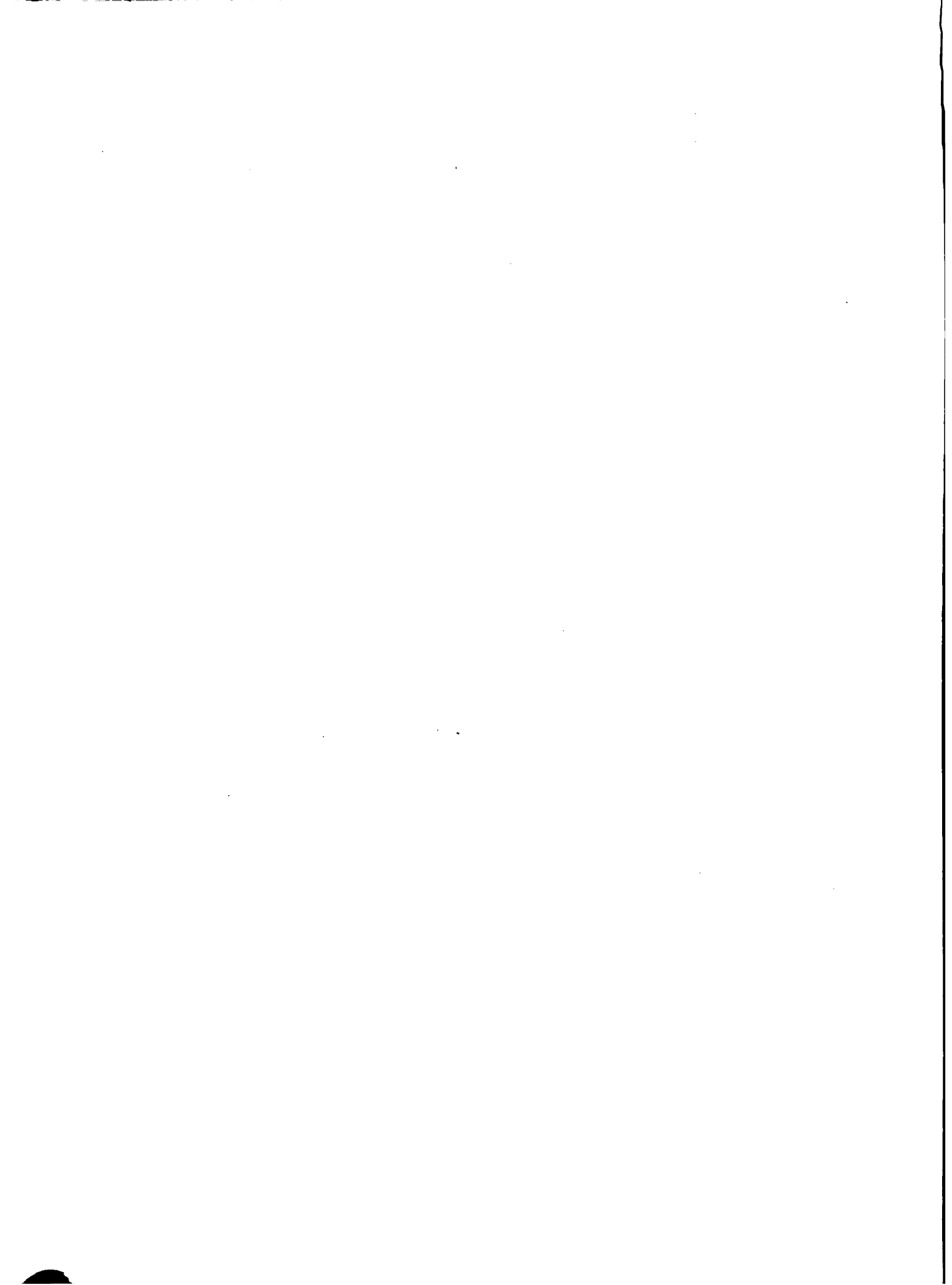
The Unit also absorbs apiculture and in that area the number of bee keepers has more than doubled over the last four years.

Detailed work programmes are prepared on a two-year basis while the Division's broad objectives have had five (5) year projections.

Included also is staff training to Master's Degree level in Tropical Parasitology and degree level in husbandry personnel.

Staff placement and movement is also a challenge being addressed.

In the future legal registration and control of approved animal drugs will be addressed. To date these are controlled by the Chief Veterinarian.



COUNTRY REPORT - GRENADA

by
Dr. Buxton Nyack

INTRODUCTION

A healthy livestock industry is a valuable asset to any nation. For the past thirty (30) years, the livestock industry of Grenada was not prioritized as an important aspect of the economy. In spite of this neglect, Grenada continues to enjoy freedom from major exotic diseases except Rabies.

It is the intention of the present government to mobilize the financial and manpower resources, based on our economic strength, to improve the livestock industry so that it becomes a viable aspect of the economy by the year 2000.

Grenada is one of the most unique countries of the Caribbean. In Grenada the local indigenous farmer is a very poor man owning one to five (1-5) animals on which his entire family depends for survival. It is only within the last few months that many expatriates have returned to Grenada and have expressed interest in undertaking livestock farming on a large scale. Currently, there are no large scale organized farms as exist in our sister Caribbean Islands.

In 1986, we have developed our "Ten Year National Livestock Development Plan" in which an organizational chart fits perfectly into this future livestock development programme by the year 2000. We consider this chart as our Administration of the Animal Health Services. It will be gradually implemented as our livestock industry progresses.

EPIDEMIOLOGICAL SURVEILLANCE

Epidemiological Surveillance is a major concern of the Government of Grenada. In 1985, Bluetongue surveillance was conducted with the assistance of IICA. Also, during the latter part of 1985 through early 1986, surveys were conducted for the presence of anaplasmosis, bovine tuberculosis, brucellosis and for bont tick (*Amblyomma variegatum*). We have commenced our survey for Bluetongue virus in sheep from April 1987. During the course of the year, we shall also do similar tests in cattle and goats.

We wish to share and receive information on the outbreaks of exotic diseases within the livestock industry more expeditiously throughout the Caribbean. We have experienced situations where affected meat has actually entered and been sold in our country unknowingly to us, by unscrupulous businessmen who are prepared to sacrifice the health of the nation for a few more dollars. We ask that our counterparts notify us, whenever possible, of affected meat destined for our port.

VETERINARY DIAGNOSTIC LABORATORY

The Government of Grenada intends to establish a well equipped Veterinary Diagnostic Laboratory to provide complete services in the areas of Bacteriology, Serology, Pathology, Parasitology, Virology and Toxicology. A trained Veterinary Officer will be directly in charge of the Laboratory with an adequately trained Laboratory Technician as his subordinate. This is our vision by the year 2000.

INSPECTION OF ANIMALS AND OTHER PRODUCTS AT PORTS OF ENTRY AND EXIT .

The inspection of animals and animal products in Grenada at ports of entry and exit has improved especially with the opening of our new airport. Nevertheless, there are some gaps within the inspection service which need to be addressed.

Although several requests have been made for the establishment of quarantine facilities, Grenada is still devoid of such a vital facility. We do hope that better sense of judgement will prevail among our policy makers to seek funds for such a facility. USAID has volunteered to train selected personnel for this service in our effort to maintain an exotic disease free environment. The Government of Grenada has decided to adhere to the laws and to administer strict control of the exportation and importation of animals and their products which enter or leave the country.

FOOD PROTEIN

Meat inspection and inspection of slaughterhouses are still under the portfolio of the Medical Public Health Department as established in the colonial era. Nevertheless, submissions have been presented to the Cabinet of Grenada's Government to transfer this important function to the Veterinary Division. We solicit the assistance of IICA and PAHO in this vital effort.

EMERGENCY SYSTEMS FOR PREVENTION, CONTROL AND ERADICATION OF EXOTIC DISEASES

Grenada recognises the need for an emergency system to control and eradicate exotic diseases if the occasion should arise. Currently, we are basically free from exotic diseases. Nevertheless, we are developing an emergency system from Dr. Joseph Leo Robinson's document based on our manpower and financial resources. As soon as this is accomplished, we intend to test this emergency exercise programme for its effectiveness.

RESEARCH ON ANIMAL HEALTH

The Veterinary Division of Grenada feels that information should be made available to all Veterinary Divisions in the Region of ongoing Veterinary Research Programmes especially projects which are vital to the healthy status of our livestock industry. The results obtained from such research ventures should be presented via publications or at hemispheric congresses. We request that information received on research conducted on Animal Health in Universities abroad be made available to us and our counterparts in the Region, upon request. This is the current position taken by the Medical, Dental and Veterinary Divisions of Grenada.

VETERINARY EDUCATION

Veterinary Education is of prime importance to the Government of Grenada. We hope that our economy will be able to sustain five (5) Veterinarians by the year 2000. In-depth training in Public Health, Reproduction, Nutrition, Clinical Pathology and Animal Production in general will be stressed in order to enhance our Animal Health Plans by the year 2000.

It is the intention of the Veterinary Division to reassess the status of the Animal Health Assistants employed within the division. The introduction of intensive in-service training programmes for Animal Health Assistants within the Division will be implemented in our effort to maintain an exotic disease-free environment within our livestock industry.

BOVINE PRODUCTION

The Government of Grenada recognises the low reproductive rate which exists in our bovine population. We shall make every effort to explore the causes which have such adverse effect on our meat and milk production. Emphasis will be placed on animal health and nutrition. Specialist assistance will be sought as the need arises.

As time goes on, a decision will be made whether to embark on Embryo Transfer as opposed to an intensified Artificial Insemination Programme with the establishment of a well-equipped reproductive laboratory. These programmes will be implemented in accordance with the need of livestock producers. Attached to the reproductive laboratory will be a unit to demonstrate aseptic techniques which are required to minimize uterine infection thereby increasing production.

AVIAN PRODUCTION

The thrust of our Government, within the poultry industry, will be focused on improving factors which will enhance production and reduce losses. Proper management will be stressed and programmes will be instituted to educate poultry farmers in better management procedures.

SWINE PRODUCTION

Swine production is also considered as a vital source of our animal industry. Farm management, nutrition, reproductive and parasitic problems will be addressed effectively. Programmes will be instituted to train swine farmers in proper management techniques. This will assist farmers in reducing some of the losses which they are experiencing at the moment.

RABIES CAMPAIGN

Rabies is endemic in Grenada. Every year Grenada experiences economic losses within the livestock industry due to rabies infection in spite of our yearly vigorous immunization campaign which is conducted under the auspices of PAHO.

We have observed that our mongoose (carrier of the virus) population is steadily increasing although an entrapment programme is being carried out.

The Government of Grenada is desirous of seeking to eradicate or to immunize the mongoose population by the year 2000. It is only with the implementation of one of these programmes Grenada will become free of this perennial problem which is detrimental to both our human population and to our livestock industry.

CONCLUSION

The Veterinary Division of the Ministry of Agriculture in Grenada expresses its sincere thanks to IICA and PAHO for their unwavering assistance rendered to our country. We feel that, with their input, we shall achieve our goals by the year 2000.

"COUNTRY REPORT - JAMAICA

by

Dr. Linden Bryan

Over the period 1985-1987, the Veterinary Division in the Ministry of Agriculture continued to be responsible for providing animal health services to the Livestock and Poultry population of the country. In many areas of activities the shortage of professional personnel and financial constraints curtailed the functions. However, attempts were made to manage limited resources effectively, and to some extent successfully.

STAFF

The Division has the following officers on staff:

	1985-1986	1986-1987
	-----	-----
Veterinary Officers	15	13
Animal Health Assistants	42	38
A.I. Technicians	10	10
Laboratory Technicians	5	4
Laboratory Trainees	3	4

Two (2) Senior Veterinary Officers resigned to enter private practice and three (3) recent recruited Veterinary Officers resigned to pursue further studies and one (1) to enter private enterprise.

Four (4) Peace Corps Veterinarians were assigned to the country and assisted greatly in filling the vacuum created by the resignations.

Two (2) recent Graduates who studied with the Government's assistance joined the service in 1985-1986.

FIELD SERVICES

The Parish Veterinary Teams continue to provide clinical service to privately owned animals as well as undertaking regulatory services and duties under specific programmes. Clinical work on farm animals continues to absorb a considerable portion of the officers' time.

	1985-1986	1986-1987
	-----	-----
Farm visits	14,081	13,179
No. Clinical Cases	9,369	8,400
No. Advisory Cases	925	1,105
No. Regulatory Cases	18,574	20,321

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VACCINATION PROGRAMMES

Vaccination against Clostridial and Pasteurella infections in cattle is considered a very important activity and although the condition is endemic in the country many small farmers are negligent in having their cattle vaccinated at the required age. The programme is ongoing in many parishes but with the drastic reduction in the agricultural extension officers, organisation of these campaigns becomes the responsibility of the veterinary staff.

VIBRIOSIS AND LEPTOSPIROSIS

Vaccination of cattle with combined vaccines for Campylobacter and Leptospirosis is undertaken by veterinarians attached to the fertility units. The results obtained in the increased calving percentage indicated that there is need to continue to advocate the use of the vaccine.

SWINE ERYSIPELAS

Routine vaccination is carried out against the condition. There was, however, a drastic reduction in the national sow herd, hence the reduction in animals vaccinated as well as in the production of pork because of the deregulation policies of the Government and the removal of subsidy on animal feeds.

POULTRY DISEASES

Vaccines are imported and used routinely for the following conditions: New Castle Disease, Infectious Bronchitis, Marek's Disease, Fowl Pox and Gumboro Disease.

TETANUS AND CLOSTRIDIAL INFECTIONS

Vaccination against Clostridial infection is carried out on a limited scale on a few large goat and sheep farms.

EQUINE VIRAL RHINOPNEUMONITIS

Vaccinations against this condition were carried out on horses mainly in the racing industry.

BOVINE FERTILITY PROGRAMME

A Project funded by USAID through the Jamaican Livestock Association provides the services of a specialist in this area. The Veterinary Division provides a counterpart and these officers carried out the following examinations:

	1985-1986	1986-1987
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No. Cows examined	27,651	15,707
No. Bulls examined	600	503

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ARTIFICIAL INSEMINATION

Two (2) large dairies and one (1) beef farm undertook insemination of their animals while insemination under veterinary supervision was provided for farmers in predominantly dairy producing areas of the country utilizing semen of Jamaican Hope Breed of cattle and to a limited extent Jamaican Red Poll and imported breeds.

TUBERCULOSIS AND BRUCELLOSIS ERADICATION PROGRAMME

An accelerated programme for the testing of cattle in which 18,339 cattle were tested for tuberculosis and 22,746 for Brucellosis enabled the country to achieve Modified Accredited Area Status for Tuberculosis. However, because of the high incidence on two (2) farms in one parish the modified certified free status for Brucellosis in three (3) parishes could not be obtained.

Retesting of past reactor herds continues on an ongoing basis in all parishes.

CAPRINE ARTHRITIS & ENCEPHALITIS (CAE)

This disease was diagnosed in a herd of goats from Canada that were imported to upgrade the local breed and to assist in the development of a goats' milk industry. Over 80% of the animals imported were sero-positive for the condition. The herd continues to be under quarantine and efforts are being made to produce CAE free offspring by depriving them of colostrum and milk from the CAE positive dams.

The recent difficulty in securing antigens to test the animals in the programme is frustrating the exercise.

QUARANTINE SERVICES

Surveillance at the two airports and seaports at Kingston and Montego Bay continues under this unit. The activities include:

1. Inspection of ships
2. Inspection of aircraft
3. Inspection of all animals and poultry imported and quarantining when necessary
4. Issuing of permits for the importation of animals, birds, meat, poultry and their products
5. Surveillance of distribution of international garbage at airports
6. Operating the quarantine facilities.

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MEAT INSPECTION EXPORT PROGRAMME

It is felt that Jamaica could take advantage of her proximity and low labour cost to process and export meat and meat products to USA and Canada. A programme was introduced to prepare legislation of equivalency and develop residue profiles in an attempt to seek approval. The responsibility to develop and administer the programme will be with the Veterinary Division. Equipment and supplies to undertake residue testing and species identification is on order and it is scheduled to develop this capability in conjunction with the Bureau of Standards in 1987.

DELIVERY OF VETERINARY SERVICES PROJECT

This project provided the construction and equipment of thirteen (13) Veterinary Clinic/Office Complexes island-wide. Additionally, seventeen (17) Land Rovers were provided and these have contributed greatly to the improvement in the working conditions especially in the rural areas.

A revolving drug fund is now operational and a proposal to operate a revolving motor car loan fund is receiving active consideration.

FAO PROJECT

A project to study Animal Health Programming for Jamaica was completed and recommendations were made after several studies were undertaken to determine the impact of certain diseases on the livestock population.

TICK CONTROL PROGRAMME

A proposal for the control of the cattle tick in Jamaica was prepared but because of lack of financial support could not be implemented. It is hoped that with consideration being given to a wider *Amblyomma variegatum* Eradication Programme in the Caribbean support will be forthcoming for the feasibility study.

EMBRYO TRANSFER

A project to develop local capability in this area was undertaken in collaboration with Lincoln University. Approximately ten (10) calves were produced using this technique and two local veterinarians received "hands on" training in this procedure.

TRAINING AND SEMINARS

Four three day workshop/seminars were held for Veterinary Officers and Animal Health Assistants.

Training for Hog Cholera Diagnosis was undertaken by one technician at USDA - Veterinary Services Laboratories at Ames.

SCREWWORM ERADICATION

Efforts were made to revise the project and the livestock sector through the Jamaica Livestock Association which has pledged its support, but the implementation of the project could not take place because of the inability of USDA to participate at this time.

EMERGENCY ANIMAL PREPAREDNESS EXERCISE

An emergency preparedness exercise to test reactive capacity to introduction of exotic diseases (rabies) was carried out in 1986 with the assistance of PAHO. Many observers and participants from Caribbean countries participated.

MEETINGS AND SEMINARS

Jamaica hosted the following Intra-regional Meetings:

- CARICOM Meeting of Chief Veterinary Officers, 1985
- Caribbean Veterinary Public Health and Tourism Seminar, May 24-29, 1986
- FAO Workshop/Seminar on Animal Health Services, Caribbean, September 22-26, 1986.

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COUNTRY REPORT - TRINIDAD & TOBAGO

by

Dr. Vincent Moe

POLICY

To maintain and increase the food production capacity of the livestock subsector of Trinidad & Tobago consistent with the efforts of the Ministry of Food Production, Marine Exploitation, Forestry and the environment.

SPECIFIC OBJECTIVES

The main thrust of the Division's activities is directed towards increasing the profitability of livestock and poultry production through the reduction of losses due to animal diseases. The Division collaborates closely with the Veterinary Public Health Unit in the surveillance, control and eradication of zoonoses and programmes aimed at the production of wholesome animal products for domestic and foreign consumption.

All field activities are supported by the Veterinary Diagnostic Laboratory, staffed and equipped to conduct a wide range of diagnostic procedures with the exception of virology.

MAJOR ACTIVITIES OF THE DIVISION:

A. RABIES PREVENTION AND CONTROL

The control of vampire bat transmitted paralytic Rabies continues to be one of the major programmes of the Veterinary Division. This programme is divided into two (2) major activities: Vampire bat control and Livestock vaccination against Rabies.

1. VAMPIRE BAT CONTROL

Since the introduction of the chemical control of vampire bats through the use of diphacinone, the prevalence of bat biting and Rabies transmission through the vampire bat has been significantly reduced.

Vampire bat populations and by consequence the bat biting levels of livestock vary from one area to another throughout the country. It fluctuates from a level of near nil bat biting for most of the year in county Caroni to sporadic incidence in St. David, Mayaro and most of St. Andrew and regular controllable incidence in parts of counties St. George, Nariva and Victoria. The main source of the vampire bat problem is in county St. Patrick which for the past five years yielded approximately 50% of all vampires caught in the island. The main thrust in field control for 1987 will be aimed at the following:

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- a. A reduction in the population of *Desmodus rotundus* and *Diademus* young in Trinidad using the anticoagulant diphacinone.
- b. Prevention of the spread of these bats from the areas of highest incidence (St. Patrick) to adjoining districts.
- c. The amplification of surveillance of bat biting nationwide.

2: LIVESTOCK VACCINATION

Vaccination of livestock is an integral part of the Rabies control programme. During the period under review the following species of livestock were vaccinated.

<u>Livestock Species</u>	<u>No. Vaccinated</u>
Bovine	3434
Buffalo	983
Equine	57
Goats	196
Sheep	38
Donkeys	6

There was one case of Rabies in cattle during the period under review. Appendix I provides information on the number of clinically suspected and laboratory confirmed Rabies cases occurring in cattle during the period 1970 to 1986. These figures indicate a declining incidence of the disease in the country except for 1985 when there were ten (10) clinically diagnosed cases.

8. POULTRY SURVEILLANCE PROGRAMME

The Poultry Surveillance Programme is administered by the Poultry Surveillance Unit of the Division. The main thrust of its field work is centred around broiler and layer farms, hatcheries and to a lesser extent breeder flocks.

a. BROILER FARMS

During 1986 a total of 5,121 visits were made to 293 broiler farms. These farms have a capacity of 6,816,514 chickens per grow out. Total production for the year was 7,882,613 broilers on farms visited.

Many of the disease problems encountered during the year were directly related to inefficient management techniques.

The disease problem of greatest significance was chronic respiratory disease. Other diseases of importance were Bronchitis, Endoparasitism, Coccidiosis, Infectious Bursal Disease and Aspergillosis.

b. LAYER FARMS

A total 602 visits were made to 50 layer farms. Those 50 farms have a capacity of 328,800 commercial hens and produced 4,202,942 eggs. Endo and ento parasites continue to be a major problem affecting commercial hens. The number of layer farms diagnosed as Mycoplasma gallisepticum positive continue to be a major area of concern particularly in light of the growing broiler breeder flock operations being established for the production of hatching eggs.

c. BROILER BREEDER FARMS

During the period under review most of the work done was with one local broiler breeder operator. However, our attempts to offer technical assistance to this operator did not produce the results expected and the quality of hatching eggs produced was far below our expectations.

d. HATCHERY SURVEILLANCE

Approximately 60 visits were made to hatcheries for the purpose of taking bacteriological samples and many other follow-up visits were made for the purpose of observation and discussion with hatchery operators.

The Unit also carried out surveillance of day old chicks and hatching eggs imported into the country. No salmonella organisms were isolated from birds tested and all chicks tested were negative for antibodies to Mycoplasma gallisepticum and Mycoplasma synoviae.

TUBERCULOSIS

The Division continued the testing of dairy cattle for Tuberculosis. Two thousand nine hundred and ninety (2,990) head of dairy cattle and eighty nine (89) buffalo were tested with Bovine P.P.D. Tuberculin during the period under review. All tests were negative. As part of the abattoir trace back programme in collaboration with the Veterinary Public Health Unit, Ministry of Health, an increase in the number of caseous lesions in the mandibular and mesenteric lymph nodes of pigs slaughtered at Trinidad & Tobago Meat Processors was observed.

Samples were sent to the Veterinary Diagnostic Laboratory, Curepe and the Pan-American Zoonoses Centre, Argentina for culture and typing. They were found to be positive for Mycobacterium bovis. The herds of origin will be identified and Tuberculosis testing will be performed as part of a test and slaughter programme.

D. TICK BORNE DISEASES

It has been generally accepted that Anaplasmosis and Babesiosis present significant constraints to cattle production in the country. In the early part of the 1970's high mortality was experienced with imported pure bred Holstein on Government Stations and state land projects. The insidious losses due to these diseases are currently being addressed by the Division. A project has been embarked upon having as its principal aim, the development of a vaccine against Anaplasmosis and Babesiosis, using local strains of the organisms.

A short term consultant provided by the Inter-American Institute for Cooperation on Agriculture has assisted the Division in training and a serological survey for Anaplasmosis and Babesiosis. Two officers, a Veterinarian and a Laboratory Technician, were trained in the USA in laboratory and field techniques for vaccine production.

E. REPRODUCTIVE HERD HEALTH

It has been recognised that subfertility is a major constraint to livestock development and productivity in the dairy sector. Through the collaborative efforts of the Veterinary Physiologist corrective measures were applied to improve conception rates in dairy cattle. Two thousand one hundred and eighty five (2,185) animals were included in the programme for 1986. The results have been encouraging, so far, and the programme will be expanded in 1987 to include wider participation from the farming community.

F. EQUINE INFLUENZA

An outbreak of Equine Influenza was reported on January 25, 1986 at the Arima Race Track. Quarantine measures were instituted to prevent the spread of the disease which resulted in the cancellation of races for approximately two and a half (2 1/2) months. The disease was brought under control within one (1) month during which morbidity was about 85% and mortality zero. A mandatory vaccination programme against Equine Influenza A1 & A2 strains, which was recommended by the Veterinary Services Division, has been implemented by the Trinidad & Tobago Racing Authority at all race tracks.

G. DISTRICT VETERINARY CLINICAL SERVICES

The Division offers a clinical veterinary service to farmers throughout Trinidad & Tobago.

During the period under review, over twelve thousand eight hundred (12,800) clinical cases were attended to by district Veterinarians and Animal Health Assistants along with approximately four thousand (4,000) revisits. The Poultry Surveillance Unit made five thousand, seven hundred and twenty-three (5,723) visits to poultry farms over the same period.

H. TECHNICAL COOPERATION

The Division continued its technical cooperation programmes with the Inter-American Institute for Cooperation on Agriculture on several important regional projects which are targeted for implementation in 1987.

These were as follows:

- i. Feasibility study for the eradication of the Tropical Bont Tick (*Amblyomma variegatum*): The Division will participate in the Technical Workshop scheduled for March 17-19 in Barbados on the Tropical Bont Tick. Although this tick does not occur in Trinidad & Tobago the Authorities are very much concerned in its potential spread through trade in live animals from the Eastern Caribbean.
- ii. Animal Health Information and Surveillance System: The Division will participate in a Regional Animal Health Information and Surveillance System Feasibility Study coordinated and collaborated by the Inter-American Institute for Cooperation on Agriculture and North Carolina State University, USA. This study is aimed at the establishment of a national information system for the Veterinary Services of Governments of the Antillean Zone of the Inter-American Institute for Cooperation on Agriculture.

I. DIAGNOSTIC LABORATORY

The Laboratory is divided into nine (9) sections. These are Haematology, Parasitology, Biochemistry, Bacteriology, Mycology, Virology, Toxicology, Serology, Necropsy and Histopathology. There were eleven thousand five hundred (11,500) submissions for examination during the year.

Requests were made for eighteen thousand, three hundred and eighty seven (18,387) tests. These were as follows:

Haematology (includes Cytopathology)	-	1817
Parasitology	-	3974
Biochemistry	-	145
Bacteriology	-	4723
Mycology	-	2631
Virology	-	36
Toxicology	-	127
Serology	-	3353
Autopsy	-	787
Histopathology	-	786
Other	-	8
		<u>18387</u>

All toxicology was done by the Forensic Science Centre of the Ministry of National Security. Appendix II shows a summary of the specimens submitted for examination in the various sections of the laboratory.

J. NOTIFIABLE DISEASES

The Notifiable Diseases suspected during the year are shown at Appendix III. Those confirmed were Enzootic Bovine Leucosis, Equine Influenza, Bovine Piroplasmiasis, Rabies and Tuberculosis. Details are shown at Appendix IV.

K. POULTRY SURVEILLANCE

A total of eight thousand, two hundred and eighteen (8218) tests were done on specimens of avian origin. Approximately eighty (80) percent of these were directly related to the Poultry Surveillance Programme.

/...

APPENDIX I BABIES CASES IN TRINIDAD FROM 1970 TO 1986

Year	Location	No. of Clinical & Suspected Cases	No. of Laboratory Confirmed Cases
1970	St. Mary's Moruga	47	2
	Guayaguayare Village	5	1
	Bernstein, Forest Reserve	4	2
1971	Fyzabad	2	0
	Diego Martin	3	1
1972	Guayaguayare Rd., Mayaro	7	2
	Beach Camp & Los Bajos, Palo Seco	13	1
1973	North Manzanilla	1	1
1974	Fishing Pond, Sangre Grande	8	4
	Cumoto (goats)	4	4
1975	Toco Village	2	2
1976	Los Bajos, Fyzabad	2	1
1977	Cumuto	1	1
1978	-	12	6
1979	Caigual, Fishing Pond	4	4
	Mayaro	1	1
	Fyzabad	2	2
1980	-	Nil	Nil
1981	-	Nil	Nil
1982	-	Nil	Nil
1983	St. Helena, St. David	1	2
	Turure	1	
1984	Turure	1 (Suspect)	Nil
1985	Victoria	8	9
	Waller Field	2	

APPENDIX II: SUMMARY OF REQUESTS FOR EXAMINATION - 1986

SPECIES	HEMATOLOGY	PARASITOLOGY	BACTERIOLOGY	BIO-CHEMISTRY	MYCOLOGY	SEROLOGY	HISTO-PATHOLOGY	VIROLOGY	TOXICOLOGY	CYTO-PATHOLOGY	AUTOPSY	OTHER	TOTAL
Avian	-	17	2817	-	2350	2338	136	-	4	-	556	-	8218
Bovine	729	1974	778	111	12	924	81	24	9	13	3	3	4661
Canine	519	1077	246	27	119	6	215	6	81	41	111	1	2449
Canine N.S.*	2	128	-	-	-	-	2	-	3	-	2	-	137
Caprine	30	78	66	3	11	9	21	-	17	1	14	1	251
Equine	422	275	107	2	6	74	31	-	-	35	5	-	957
Feline	7	7	6	-	4	-	2	-	1	1	3	-	31
Ovine	16	307	38	1	4	2	47	-	10	-	28	-	453
Porcine	1	14	473	-	4	-	203	-	-	-	10	-	705
Small Laboratory Animals	-	66	42	-	1	-	37	-	-	-	37	-	183
Other	-	31	150	1	120	-	11	6	2	-	18	3	342
TOTAL	1726	3974	4723	145	2631	3353	786	36	127	91	787	8	18387

*N.S. - Ministry of National Security

APPENDIX III: NOTIFIABLE DISEASES SUSPECTED BY SPECIES - 1986

DISEASES	BOVINE	PORCINE	AVIAN	OVINE	CAPRINE	EQUINE	OTHER	TOTAL
Brucellosis	294	-	-	2	-	-	-	296
Contagious Bovine Leucosis	639	-	-	-	-	-	-	639
Equine Infectious Anemia	-	-	-	-	-	6	-	6
Equine Influenza	-	-	-	-	-	42	-	42
John's Disease	4	-	-	-	2	-	-	6
Newcastle Disease	-	-	443	-	-	-	-	443
Paratuberculosis	66	-	-	-	-	-	-	66
Rabies	2	-	-	-	-	-	6*	8
Tuberculosis	8	434	1	1	-	-	-	444
TOTAL	1013	434	444	3	2	48	6	1950

*Bats

APPENDIX IV - NOTIFIABLE DISEASES CONFIRMED BY SPECIES - 1986

DISEASES	BOVINE	PORCINE	EQUINE	TOTAL
Enzootic Bovine Leucosis	314	-	-	314
Equine Influenza	-	-	7	7
Piroplasmosis	16	-	-	16
Rabies	1	-	-	1
Tuberculosis	-	101	-	101
TOTAL	331	101	7	439

COUNTRY REPORT - GUYANA

by

Dr. Lennox Applewhaite

There has been a vast improvement in the veterinary manpower situation in the intervening years since RESANTILLAS III in 1984.

Fourteen (14) new veterinarians were added to the Ministry's ranks, five (5) in 1985 and nine (9) in 1986, 57.1% of whom were trained in Eastern Bloc Countries. More veterinarians are expected back in the ensuing years, most of whom would have been trained in the East. The total number of veterinarians now in Guyana is thirty, of whom ten are with the Ministry of Agriculture, eight are with the Ministry of Regional Development (which I will return to), one is with the Ministry of Health in Veterinary Public Health, seven are with various public sector organizations e.g., National Dairy Development Programme, LIDCO and the remaining four are privately employed.

It was initially feared that it would have been difficult to place this large influx of veterinarians within the Public Service and the public sector, but when the ever widening role of the veterinarian is considered in twentieth century society and that there need to expand and improve our quarantine, regulatory and veterinary public health services and to allow veterinarians inroads into wildlife programmes, it is evident that the absorption of the new graduates into the public sector would only be limited by the availability of funds. Thus all the new arrivals were placed but unless vision and imagination are brought into play and restraint is applied in selecting for undergraduate veterinary courses, a problem will arise in finding available employment for future veterinarians in the Government services.

The rate of attrition among veterinarians is not unduly high but it should be noted that the Public Service lost three of its young veterinarians last year, but fortunately one of them is still with us on a part time basis. It should also be borne in mind that unless opportunities for promotion and further training are timely provided for this corps of young graduates, disenchantment and apathy will proliferate within their ranks. This has been catered for to a large extent, however, by the proposed expansion of the Veterinary Livestock Services, the allocation of additional veterinarians to the Regions and the on-going training programme for graduates in a number of professional fields. The reason why I have dealt at some length with the subject of veterinary manpower is that Guyana has long been accustomed with a paucity of veterinarians

within the Public Service, and less than a decade ago there would have been just about eight or nine indigenous veterinarians in the Ministry and the Government agencies, with an all told total of about ten in the country. So to have the ranks suddenly swelled by fourteen in two years can be problematic if this were not catered for.

It would have been thought that the significant increase in the pool of Government Veterinarians would have resulted in a concomitant improvement in the organisation and execution of the veterinary services but this is not altogether true. Guyana is now divided into ten political regions, each with a large degree of autonomy and administered by the Ministry of Regional Development. Officers who were once in the Ministry of Agriculture have now been transferred to the Regions, to be regionalised, thereby releasing them from all administrative control by the Ministry of Agriculture which for this purpose is regarded as the Centre. Other Ministries which have been affected by regionalism are the Ministries of Health and Education. Each Region has a Chairman who is the Political Head, and an Administrator or Regional Executive Officer who is the Senior Public Servant there. Each Region has its own budget and makes up its own annual programmes. Personnel at the Centre, i.e. Ministry of Agriculture, are regarded as a pool of specialists and have an advisory and guiding role.

The long and short of all this is that the regional veterinarian has no administrative responsibility to any but the Regional Executive Officer and whereas the Chief Veterinary Officer formerly exercised complete control over all Veterinarians and Livestock Assistants, he or any other Senior Officer at the Centre now has to go through the Regional Executive Officer to the Veterinary Officer. This, as has been our experience, occasions delay in the submission of reports to the Centre as these are not necessarily perceived as important by the Regions and are often relegated to areas of low priority.

A case in point is the periodic submission of technical reports to the Centre. Regional Veterinarians have been asked, through the approved channels, to submit monthly reports on diseases and production to the Veterinary & Livestock Science Division, but the response has been poor. Reporting on disease and production patterns to international agencies is therefore restricted to information gathered from the Veterinary Laboratory and the Veterinarians operating at the Centre (MINAG), and does not represent a true picture of the country situation. However, in sympathy with the regional veterinarians, it should be noted that they are confronted by some very serious problems, the most important of these being, for those who do not have cars, the inability to move around to do their work. And even for those who possess cars, the mileage ceiling is a serious constraint. Another difficulty

3.

that faces the regional staff is a shortage of stationery, for although monthly reports are submitted to the region, copies rarely filter down to the Centre. It should be borne in mind, at this point, that the Ministry of Agriculture is obligated to rendering all possible forms of assistance to the Regional Veterinarian and his Staff. Accordingly, veterinarians are issued with laboratory field kits and instruments as long as these are available.

The latter have been in short supply largely because of the number of veterinarians to whom they have to be issued and steps have been taken to have this rectified by working through the Veterinary Association, CARDI and CIDA. Similarly, the Ministry's reaction to the poor response from the Region is the creation of the Veterinary Epidemiology Unit or, as it is also called, the Veterinary Field Services Unit. This Unit was formed last October and has a staff of three veterinarians for the present. Its terms of reference are, among others, to conduct epidemiological studies and monitor livestock diseases, to investigate and control outbreaks of disease in all classes of animals and to compile and circulate data among livestock personnel countrywide. This Unit will thus work closely with the Veterinary Diagnostic Laboratory and the Regional Veterinarian and is not intended to do the latter's work in the Region but to liaise with and assist him in his execution of national programmes. The Unit so far has been active in the initial investigation into the distribution of thallium sulphate in livestock and livestock feed and products, and in the collection of sera to conclude the study of bovine leukosis infection in the national herd. At this point I would like to congratulate Dr. Dodson and his team for the effort they have put in during the short time the Field Services Unit has been in operation.

I have deliberately avoided the topic of animal health as this will be dealt with in the laboratory report but there are a few aspects I would like to touch on. IICA and the Ministry of Agriculture have embarked on an animal health programme in keeping with the National Dairy Development thrust, the first objective of which is to make Guyana self-sufficient in milk. Towards this end selected small dairy herds are to be monitored for reproductive performance, the incidence of mastitis and the level of endo- and ecto- parasite infestation. The animals will also be tested for brucellosis, leptospirosis and tuberculosis (this by the Caudal Fold Test). The aim of this is to encourage the farmer to keep records of his herd's milk yield and reproductive performance and to demonstrate that healthy and well managed animals can be more productive. This programme depends heavily on inputs from the Regional Veterinarians but again the response has not been as expected.

DISEASES OF IMPORTANCE

Avian

Dr. Reid in the Laboratory Report will go into the details of the outbreak of "malabsorption syndrome" which occurred in broiler chicks early last year.

Bovine

Paralytic rabies in cattle will also be detailed by Dr. Reid in the Laboratory Report.

Bovine Leukosis

Following the observation of a persistent lymphocytosis in blood smears of Holstein X Zebu, three to four year old cattle, 186 sera were sent to the laboratory in Trinidad to be tested for antibodies to bovine leukosis infection. 138 or 74.2% were found to be positive to the test. At the same time 33 sera from indigenous cattle which were available were tested and 29 or 87.9% reacted to the test. This was in February 1986. To compare this picture with that of the national herd, 200 sera were removed from the serum bank, representing samples taken from cattle throughout the country in 1981/82, and submitted for testing. 57 of these (28.5%) were found to be positive. The discrepancy between these results and those of the small sample of local cattle taken in 1986, promoted a further sampling of the national herd in 1986 to compare with those of 1981/82.

This has been done and some 200 sera from coastal cattle will be tested in Trinidad shortly.

Ovine and Caprine

Trypanosomiasis in sheep was first brought to our attention in 1985 when blood from a moribund and anaemic lamb was observed to contain several trypanosomes on examination. The post mortem of the animal, however, revealed a heavy infestation of stomach worms. The flock was subsequently dewormed and bled and 50% of those sampled were found to be positive for trypanosomiasis. The trypanosomes were tentatively identified as *Trypanosoma vivax* at Edinburgh and studies are now in progress to determine the distribution of the parasite in sheep and goats in coastal Guyana.

IMPORTATION OF DAIRY CATTLE

The Guyana Sugar Corporation (GUYSUCO) imported some 250 head of Holstein bred and unbred heifers in December 1986. On arrival of the last shipment 35 of the animals were dead or died shortly thereafter from heat stroke/heat exhaustion due to crowding of the animals in the last three pens to be filled.

5.

This was brought to the attention of the exporters. Four months after arrival none of the animals had died from babesiosis or anaplasmosis and this was due to their being treated prophylactically with "Imizol" (Imidocarb). Deaths among the animals have been few and were restricted to about twenty five calves.

Private farmers also imported about 65 dairy animals from the same source and deaths among these from tick fever and anaplasmosis have been few, about eight, due to improved prophylactic treatment.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for consistent and reliable data collection processes to support effective decision-making.

"REPORT ON THE IV INTERNATIONAL SYMPOSIUM
OF VETERINARY LABORATORY DIAGNOSTICIANS - 1986

by

*Dr. Edward P.I. Cazabon

The Symposium was held at the International Congressentrum RAI, Amsterdam, the Netherlands from June 2 to 5, 1986.

Participants came from forty-eight (48) countries of the world - from both sides of the Iron Curtain and of the Equator. The only English-speaking Caribbean country listed as attending was Guyana and yours truly was mentioned as the representative - no doubt representing the CARICOM Region.

There was a total of two hundred and thirty (230) presentations including poster presentations covering all aspects of Veterinary Laboratory Diagnostics. The distribution of presentations was as follows:

<u>TOPIC</u>	<u>NUMBER OF PRESENTATIONS</u>
Bacteriology	39
Clinical Pathology	42
Fertility and Reproductive Endocrinology	19
Fish Diseases	10
Haematology	8
Laboratory Management	11
Mycology	4
Parasitology (including Haemoparasites)	16
Pathology	25
Toxicology	12
Virology	44

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An examination of the distribution of presentations shows that whereas there were eight (8) presentations on Haematology, there were eleven (11) on Laboratory Management - five (5) of which were specifically on laboratory development and management in the Tropics.

Of significance also was the large number of presentations in the area of Virology. This is a reflection of the expanding use of the Enzyme linked immunosorbent assay (ELISA) and the application of monoclonal antibodies in ELISA.

That laboratory diagnosis of Fish Diseases could get as much prominence as Toxicology and certainly more than Haematological Techniques is an indication of the increasing importance of fish as a source of food - a fact that should receive some attention from Caribbean Veterinarians and policy makers.

LABORATORY MANAGEMENT AND DEVELOPMENT IN THE TROPICS

The problems encountered in developing and managing a Veterinary Laboratory in the Tropics were generally agreed to be the following:

1. Inadequately trained staff at all levels
2. Lack of modern equipment and the absence of a proper equipment maintenance service
3. Difficult terrain hindering rapid transmission of specimens to the laboratory
4. Climatic conditions making preservation of samples an important requirement
5. Inadequate supply of reagents and in many cases unavailability
6. Absence of facilities for data processing.

Indeed the conclusion drawn by Dr. A.J. Akakpo et al of Senegal, viz. "unfortunately, most of these constraints closely linked to geographical, climatological, political and financial conditions cannot be eased in the short run", while they were referring to African countries, can be applied without modification to Caribbean countries.

CONCLUSIONS

Discussions at the Symposium once again confirmed the necessity for veterinary laboratory diagnosis of animal diseases.

The constraints to laboratory diagnosis, especially in developing countries, were once again articulated but realistic suggestions for their removal were beyond us since it was generally agreed that these constraints were the result of geographic, climatic, economic and political conditions.

The importance of the laboratory director identifying and cooperating with other established laboratories capable of doing sophisticated tests that are occasionally required was emphasised, this being the recommendation for laboratories in both developing and developed countries.

RECOMMENDATIONS

1. IICA or other appropriate International Agency should be requested by the governments of CARICOM countries to ascertain the veterinary laboratory requirements of each country especially of the LDC's and to recommend the establishment of an appropriate laboratory service based on the requirements of the respective animal industries and with special consideration for the use of reference laboratories.
2. Some form of regular continuing education/sabbatical leave for laboratory diagnosticians in the Caribbean should be instituted. This should take the form of attachments to appropriate institutions in more developed countries.
3. The larger laboratories in the Caribbean should develop diagnostic capabilities in specific areas and serve as reference laboratories to other laboratories in the Region.

ACKNOWLEDGEMENTS

The author is grateful to the Government of Trinidad & Tobago and the former Ministry of Agriculture, Lands and Food Production (now Ministry of Food Production, Marine Exploitation, Forestry and the Environment) in particular, for allowing him to participate in this Symposium.

Participation was only possible because of the generous funding by the Inter-American Institute for Cooperation on Agriculture (IICA) and the insistence on involvement of the Caribbean Region in this World Symposium by Dr. Franz C. Alexander, Animal Health Specialist/Director, IICA Office in Guyana, ably supported by Dr. Chelston W.D. Brathwaite, Director of the IICA Office in Trinidad & Tobago.

The author will be ever grateful to the dedicated staff of the Veterinary Diagnostic Laboratory, Trinidad & Tobago for bearing with him over the past sixteen (16) years and assisting him generally in his pursuit of veterinary laboratory development in Trinidad & Tobago and now in the Caribbean.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the experimental procedures and the tools used for data collection.

3. The third part of the document presents the results of the study, including a comparison of the different methods and techniques used. It also discusses the implications of the findings and the potential for future research.

4. The fourth part of the document provides a summary of the key findings and conclusions. It also includes a list of references and a list of figures and tables.

5. The fifth part of the document contains the appendices, which include additional data and information related to the study.

6. The sixth part of the document discusses the limitations of the study and the potential for future research. It also includes a list of references and a list of figures and tables.

7. The seventh part of the document provides a summary of the key findings and conclusions. It also includes a list of references and a list of figures and tables.

8. The eighth part of the document contains the appendices, which include additional data and information related to the study.

9. The ninth part of the document discusses the limitations of the study and the potential for future research. It also includes a list of references and a list of figures and tables.

10. The tenth part of the document provides a summary of the key findings and conclusions. It also includes a list of references and a list of figures and tables.

11. The eleventh part of the document contains the appendices, which include additional data and information related to the study.

12. The twelfth part of the document discusses the limitations of the study and the potential for future research. It also includes a list of references and a list of figures and tables.

13. The thirteenth part of the document provides a summary of the key findings and conclusions. It also includes a list of references and a list of figures and tables.

14. The fourteenth part of the document contains the appendices, which include additional data and information related to the study.

15. The fifteenth part of the document discusses the limitations of the study and the potential for future research. It also includes a list of references and a list of figures and tables.

" VETERINARY DIAGNOSTIC LABORATORY REPORT - BARBADOS

by

Dr. Stephen St. John

Interesting developments over the past two (2) years have been:

- i. Well established (and successful) techniques for mycoplasma culture with the organism now isolated from chickens, turkeys and pigs.
- ii. Submissions from slaughter houses have increased with the 'back door' introduction of Animal Health Assistants into abattoirs.
- iii. The establishment of *Oestrus ovis* in the aetiology of rhinitis in sheep.
- iv. The detection of very high porcine parvovirus antibody level in Barbadian swine on a farm with an outbreak of stillbirths, mummifications, embryonic deaths and decreased fertility. A recently imported boar had been introduced to this farm some two months previous to the outbreak.
- v. The conduction of a largely inclusive dairy cattle survey to determine the aetiology of a hyperthermic and low fertility syndrome in dairy cattle.
- vi. The investigation of lymphosarcoma in a family of closely related pigs approximately eight months old.
- vii. The strong suspicion of monensin in the aetiology of poisoning of chickens and black belly sheep. The feed company responsible has (orally) accepted responsibility for the latter but has never released to the veterinary authority the results of the tests on the implicated feed.
- viii. The continuance of the Bluetongue survey with further attempts at virus isolation by Pirbright Virus Research Institute and workers in Costa Rica.
- ix. The continued assistance to other islands in upgrading these veterinary services by training laboratory technicians with Nevis the largest island being given aid.
- x. The detection of heartworm in 2% of 1248 blood samples tested by the Knotts test.

PROBLEMS

- i. A major problem is that the Government financial framework does not supply the flexibility needed for a veterinary laboratory. Funds allocated for orders made in a given financial year cannot be carried forward when the supplies are not delivered in that year.
- ii. Lack of laboratory space.
- iii. . Equipment maintenance is, somewhat less of a problem since the much appreciated IICA sponsored short course in equipment maintenance. We would appreciate any further training in this area.

// VETERINARY DIAGNOSTIC LABORATORY REPORT - JAMAICA

by

Dr. George Grant

INTRODUCTION

The Veterinary Diagnostic Laboratory functions to "support" the field service activities of the Veterinary Division with the major objective being that of providing for a more accurate and rapid response to both actual and potential animal health disease situations in the Country. Its functions are carried out in conjunction with international reference laboratories where necessary.

PRESENT LABORATORY CAPABILITIES

This Laboratory has the capability of undertaking basic diagnostic work in the areas of pathology, microbiology, parasitology, virology and serology. However, over the past several years the functions of the laboratory have been curtailed by financial, personnel and material constraints. Prior to 1980, the laboratory while still not having its full complement of staff personnel was reasonably well staffed to undertake basic laboratory work. There were at least five (5) Veterinary Specialists. The attrition rate has been drastic so that currently there is but a single veterinarian manning the laboratory. A similar situation is obtained for the medical laboratory technologist whereby at present only two are certified with one being a retired individual. The remaining few are either technicians or trainee technicians.

In addition to the above mentioned problems, the inefficient and costly servicing of laboratory equipment has been an area of serious concern which has created added pressure on the proper functioning of the laboratory.

Again, the laboratory has been placed under extra pressure by the Accelerated National Brucellosis Eradication Programme and the fact that the laboratory has been designated the National Leptospirosis Laboratory processing both human and animal specimens. Although we are presently coping with the current work load the situation could deteriorate with the onset of new projects and surveys if the problem of personnel is not urgently resolved. The laboratory has been able to cope and maintain its level of activities through a series of improvisations.

FUNCTIONAL AREAS

As mentioned above, the laboratory is reasonably well equipped to undertake basic work in the areas of microbiology, parasitology, pathology, serology and virology.

The laboratory continues to facilitate the training of Laboratory technologists from the nearby College of Arts, Science and Training (CAST). In addition, it continues to cooperate with other local laboratories in areas of mutual and national interests.

WORK ACCOMPLISHED

During the period under review the laboratory has processed approximately 150,000 specimens. It should be noted that a significant number of poultry specimens go via the private laboratory of the Broiler Industry.

YEAR	NO OF SPECIMENS PROCESSED					
	Micro- biology	Path- ology	Parasit- ology	Vir- ology	Ser- ology	Lepto- spirosis
1985-1986	627	152	520	1400	56000	3939
1986-1987	560	115	624	827	87000	2573
TOTAL	1187	267	1144	2227	143000	6512

In addition, Laboratory personnel have participated in various projects and surveys sponsored by international organisations such as FAO, IICA and Project Hope during this period. Articles for publication on some of these surveys are being prepared.

There is at present a joint laboratory project with the Bureau of Standard re air proposed meat inspection activities.

SUMMARY

There is an urgent need to resolve the material and personnel resource problems facing this laboratory. While some attempts are being made albeit small to address the availability of laboratory supplies, the personnel situation remains acutely chronic. The personnel problem probably could be partially resolved in the short term by secondment of required personnel by some of the international organisations. At the same time, the major problem is not only that of recruiting but also that of retaining personnel.

Finally there seems to be a need for greater cooperation and interchanges between the regional diagnostic laboratories in several areas of mutual interest in order to increase regional capability.

VETERINARY DIAGNOSTIC LABORATORY REPORT - TRINIDAD & TOBAGO
by
Dr. Edward P.I. Cazabon

LOCATION

The Trinidad & Tobago Veterinary Diagnostic Laboratory is situated in the town of Curepe approximately equidistant from the Piarco International Airport and the City of Port of Spain, and in close proximity to the intersection of the two major highways - North/South and East/West.

The laboratory is also in the vicinity of the Faculty of Agriculture of the University of the West Indies (U.W.I), the Commonwealth Institute of Biological Control, the Caribbean Industrial Research Institute (CARIRI) and the Eric Williams Medical Sciences Complex where a School of Veterinary Medicine is soon to be established.

When one considers the locations of the major farms it becomes evident that the laboratory is ideally located.

FUNCTIONS AND RESPONSIBILITIES

The laboratory is responsible for the following main functions:

- a. Regulatory - to administer the Animal (Diseases and Importation) Ordinance and the Regulations made thereunder.
- b. Preventive - to take appropriate action for the prevention and control of notifiable and other diseases.
- c. Diagnostic - to provide laboratory services for the diagnosis of animal diseases and diseases of public health importance.
- d. Investigational - to provide field and laboratory services for the investigation of animal diseases and diseases of public health importance.

More specifically, the laboratory and its staff to which I shall refer later are responsible for:

- a. Performance and interpretation of laboratory tests for diagnosis and research.
- b. Maintenance of a laboratory animal colony of mice, guinea pigs, sheep and rabbits.
- c. Purchasing and stocking of all drugs, biologics, equipment, reagents and other materials used by the Veterinary Division of the Ministry.
- d. Providing a library service to the Trinidad & Tobago Veterinary Profession. This includes books, periodicals, photocopying and audio-visual facilities, and an inter-library reference service.

LABORATORY DEVELOPMENT

Over the past sixteen (16) years increased laboratory space has been provided by the construction of new facilities and by major renovations to already existing facilities. During this period a Walk-in Cold Room, Laboratory Animal Building, Maintenance Building, Veterinary Store Room, Incinerator Room, Leptospirosis Unit and a Virology Unit were provided. Only the Virology Unit has not yet been equipped. All the other facilities provided are in use. Plans for the future include construction of a new Necropsy Room, High-risk Room, Museum and Library/Conference Room.

TECHNICAL

The laboratory is responsible for testing all animal diseases in Trinidad and major tests on specimens originating in Tobago. A small laboratory established in Tobago in 1979 does simple routine tests.

Limited research on health problems affecting livestock and on diseases of Public Health importance is carried out.

Assistance is given by the laboratory to some CARICOM countries in the diagnosis of diseases.

Established in its present location in 1972, the laboratory has experienced an increase in the number of specimens examined from four thousand three hundred and seventy two (4,372) in 1971 to eleven thousand five hundred (11,500) in 1986. The number of tests performed increased from nine thousand two hundred and thirty two (9,232) in 1972 to eighteen thousand three hundred and eighty seven (18,387) in 1986.

At the present time the laboratory is divided into the following technical sections:

- | | |
|---|-----------------|
| 1. Necropsy | 6. Mycology |
| 2. Bacteriology | 7. Parasitology |
| 3. Biochemistry | 8. Serology |
| 4. Haematology
(including Cytopathology) | 9. Toxicology |
| 5. Histopathology | 10. Virology |

and there are the following supportive sections:

- | | |
|--------------------------|---|
| 1. Laboratory Animals | 4. Wash-up and
Sterilization |
| 2. Library | 5. Maintenance (grounds
& buildings) |
| 3. Purchasing & Supplies | |

In 1986 the distribution of tests performed in the various sections was as follows:

1. Necropsy	-	787
2. Bacteriology	-	4723
3. Biochemistry	-	144
4. Haematology (including Cytopathology)	-	1817
5. Histopathology	-	786
6. Mycology	-	2632
7. Parasitology	-	3974
8. Serology	-	3353
9. Toxicology	-	127
10. Virology	-	36

When the above figures are related to the various animal species the picture in Appendix I emerges. It shows that most of the tests performed were distributed among four (4) species as follows:

Avian	-	45%
Bovine	-	25%
Canine	-	13%
Equine	-	5%
Other	-	12%

The distribution in 1972 was as follows:

Avian	-	18%
Bovine	-	47%
Canine	-	18%
Equine	-	5%
Other	-	12%

During 1986 the notifiable diseases confirmed by the laboratory were Enzootic Bovine Leucosis (314 cases), Bovine Piroplasmiasis (16 cases), Rabies (Bovine - 1 case) and Tuberculosis (Porcine - 101 cases). All the porcine cases were confirmed by CEPANZO - Buenos Aires, Argentina, as *M. bovis*. With the assistance of the United States Department of Agriculture (U.S.D.A.), Equine Influenza (7 cases) was confirmed.

One hundred and fifty (150) other diseases/conditions were confirmed. These ranged from abscesses to cardiac myopathies to encephalitis to gastritis to haemoperitoneum to hepatitis to Marek's disease to neoplasias to pericarditis to pyometra to vaginitis. The most common conditions confirmed however were:

Gastro-Intestinal Parasitism	-	1336
Mastitis	-	620
Mycoplasmosis	-	374
Anemia	-	242
Inflammation	-	154
Gumboro Disease	-	136
	TOTAL	<u>2862</u>

This figure was seventy-seven percent (77%) of the total diagnoses made.

The percentage distribution of the diagnoses between the various animal species was different from the percentage distributions of the tests performed, e.g.

Species	No. Tests	% of Total Tests	No. Diagnoses	% of Total Diagnoses
Avian	8218	45	725	20
Bovine	4661	25	1698	46
Canine	2449	13	808	22
Equine	957	5	123	3
Other	2102	12	344	9

The reason for this disparity was the routine monitoring associated with a Poultry Surveillance Programme in the absence of overt disease and routine haematological and parasitological checks in other species.

Some of the conditions we have recorded on film over the years are:

Transparencies:

Bovine	-	Tuberculosis
	-	Enzootic Leucosis
	-	Eperythrozoon
	-	Liver Fluke
	-	Anaplasmosis
Porcine	-	Atrophic Rhinitis
	-	Hog Cholera
Avian	-	Marek's Disease
	-	Coccidiosis
	-	Vitamin E/Selenium deficiency
Canine	-	Tetanus
	-	Secondary Pulmonary Osteo-arthropathy
	-	Ehrlichiosis
	-	Spirocerca lupi
	-	Dirofilariasis

STAFF

None of the accomplishments referred to above would have been possible without the energetic and dedicated inputs of the entire laboratory staff. I take credit only for coordinating their activities.

The staff consists of three (3) professionals - two (2) of whom are veterinarians and one (1) a microbiologist, eleven (11) technicians, eight (8) laboratory assistants, six (6) clerical officers and four (4) persons responsible for maintenance of the grounds and buildings.

FINANCIAL

Expenditure for 1986 was T.T.\$1,412,687.00 of which 84% went towards wages. The cost of laboratory supplies during the year was T.T.\$227,317.00. This figure in 1971 was \$5,713.00 - an increase of approximately four thousand percent (4000%).

There are no charges for laboratory services.

ACKNOWLEDGEMENTS

The Government of Trinidad & Tobago, through the Ministry of Food Production, Marine Exploitation, Forestry and the Environment, is the source of funds for running the laboratory. Local and foreign veterinarians are the source of the interesting specimens received.

The Caribbean Epidemiology Centre (CAREC), the Pan American Zoonoses Centre (CEPANZO), and the National Veterinary Services Laboratories, Ames serve as reference testing laboratories for difficult or rare specimens. The Trinidad & Tobago Forensic Laboratory does all our Toxicology testing.

The Inter-American Institute for Cooperation on Agriculture (IICA) made it possible for me to attend this meeting and to present this paper.

Finally, the excellent support given by all members of the laboratory staff must be experienced to be believed.

To all of the above I shall be always grateful.

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APPENDIX I: SUMMARY OF REQUESTS FOR EXAMINATION - 1986

SPECIES	IMMUNO- TOLOGY	PARASITO- TOLOGY	BACTERIO- LOGY	BIO- CHEMISTRY	MY- COLOGY	SEROLOGY	HISTO- PATHOLOGY	VIROLOGY	TOXI- COLOGY	CYTO- PATHOLOGY	AUTOPSY	OTHER	TOTAL
Avian	-	17	2817	-	2350	2338	136	-	4	-	356	-	8218
Bovine	729	1974	778	111	12	924	81	24	9	13	3	3	4661
Canine	519	1077	246	27	119	6	215	6	81	41	111	1	2449
Canine N.S.*	2	128	-	-	-	-	2	-	3	-	2	-	137
Caprine	30	78	66	3	11	9	21	-	17	1	14	1	251
Equine	422	275	107	2	6	74	31	-	-	35	3	-	957
Feline	7	7	6	-	4	-	2	-	1	1	3	-	31
Ovine	16	307	38	1	4	2	47	-	10	-	28	-	453
Porcine	1	14	473	-	4	-	283	-	-	-	10	-	765
Small Laboratory Animals	-	66	42	-	1	-	37	-	-	-	37	-	183
Other	-	31	150	-	121	-	11	6	2	-	18	3	342
TOTAL	1726	3974	4723	144	2632	3353	786	36	127	91	787	8	18307

N.S. - Ministry of National Security

COUNTRY REPORT - HAITI

by

Dr. J.H. Jolivet Toussaint
(Translated from French by Dr. Antonio M. Pinchinat,
Regional Specialist in Technology Generation and
Transfer, IICA/St. Lucia - June 1987)

COMMUNICATION: SANITARY SITUATION IN HAITI

Foreword

Husbandry problems of pigs nowadays tend to obscure those of other species. Yet these exist and are equally pressing; thus, when they escape the control of field technicians, they become more than mere local problems, they make news headlines in the country, and at times they extend beyond our borders to be news elsewhere. In fact, diseases such as anthrax, rabies, piroplasmiasis and New Castle are causing appreciable damage in the bovine, equine, canine and avian populations with no apparent effects on other livestock species.

Animal health problems, although very serious, have not been faced with sufficient interest. Real interest is rather shown only when livestock mortality cases are reported. It is therefore imperative that such problems be given greater consideration, which should be reflected in the national budget.

It is true that efforts have been made to find immediate solution for some disease cases detected in a given zone, but there is still a need for a medium term plan. Some proposals in this sense have been put forth but have not been implemented. However, it must be pointed out that some International Organisations had led us to believe that they were ready to finance such a plan but actually no concrete action has followed their declaration of intent, except for the Pig Eradication Project (PEPPADEP).

It must be recognised though that this Project has contributed to place the country in a laudable sanitary condition by eliminating all serious porcine diseases. This is an advance that must be safeguarded by all means.

But it is not necessary to apply such a programme to eliminate or control diseases of other livestock species. The medium term plan should be accepted and supported by other sectors involved in agricultural or rural development. For example, the control of anthrax requires the support of the Ministry of the Interior and Justice, and the control of rabies requires the collaboration of the Ministry of Foreign Affairs. In other words, vaccination of the animals is not the only action that should be undertaken to fight effectively against those diseases.

Present Sanitary Problems

During the year 1986, political events that took place in the country hampered the execution of programmed activities. Nevertheless, Veterinary Nurses and Agents were called upon whenever circumstances made it necessary; this allowed the Animal Health Services (AHS) to gather some data. To date this situation can be summarized as follows:

- a. Anthrax was detected several times in some areas. It must be pointed out, though, that many cases of diseases considered to be caused by the Anthrax bacillus were actually false. Any dead animal with no apparent cause was supposed to have been killed by Anthrax. In general, without necropsy (seldom recommended) and without analysis, news about "outbreak of anthrax" spread throughout the country. This is a situation which is sometimes exploited for political ends and those who benefit from it are little concerned about the repercussions of such information.

However, places such as La Montagne (Jacmel), Baint, Petite Riviere de Nippe, Plaisance, Latibodiere (Jeremie), Baraderes and Tufette (Cayes) have been hit by the disease. A total of 98 cases have been registered. The rapid intervention of the Technicians, of course, helped to limit spread.

Thus in La Montagne the Technicians tried and were able to impose, with the cooperation of the local inhabitants, a quarantine limiting the movement of animals (particularly bovine) and products of animal origin such as milk, meat and hide of beef cattle, goats and sheep. This is not always easy.

During the same period, some cases of human contagion were detected, particularly in La Montagne and Petite Riviere, but no one died. Other reported cases had not been confirmed and ensuing diagnosis seemed to indicate that they were due to lesions poorly treated.

A similar problem showed up in Pestel (Fonds Jacques), where cases with lesions were attributed to anthrax. But it was known that people were getting drinking water from a hole which was also used by domestic animals. Physicians in the Region were asked to take samples of that water and send them to the Division of Public Health (MSPP), to be analysed. But according to the Director of that Division, this was not done.

In Gonaives and at ODVA, anthrax-related mortality cases (in livestock) were probably due to internal and

external parasites. During the dry season, especially, numerous cases of parasitosis are registered in the bovine, caprine and equine populations. Furthermore, in the Cul-de-Sac Plain, three cases of mortality due to bovine Piroplasmosis were observed.

It is therefore a real problem for the AHS, considering its meagre resources, to:

1. carry out a diagnosis of those cases; and
2. control or eliminate them.

The Carbon Disease, as called by our peasants, is the more common animal disease and the one mostly blamed in cases of livestock mortality or illness. It is strongly feared but little is done to prevent it. In fact, the control of carbon fever, besides annual prophylaxis, requires some measures which might be quite unpopular but which should be applied if concrete control results are expected.

b. Rabies

This is the least common animal disease in the country, but it is very serious in its manifestations. Often ignorance about the disease is a major cause of its damages. It occurs that a person bitten by a dog or a cat which has or is suspected to have rabies may decline to follow the prescribed treatment.

The most affected areas in the country are the Metropolitan Area, Fond des Negres, Miragoane, Cap-Haitien, Hinche, Mombin Crochu, Pignon, Fond des Blancs, Cote de Fer, L'Axe, Belladere, Lascaobas, Mirebalais, Petite Riviere de l'Arbonite and Deschappelles.

Laboratory analyses have revealed so far 15 positive cases of rabies in domestic carnivorous animals (through immunofluorescence analysis). In 1986 five cases of human death (due to rabies) have been registered. This shows the importance of the disease in the country.

The control or eradication of rabies will require joint action between the two countries that share the Island (Dominican Republic and Haiti). The principal reservoir of the virus causing the disease, that is mongoose and even stray dogs, cross the border when they need to. It would be utopia for one country to decide to solve the problem alone.

c. New Castle Disease

This disease is widespread. The number of registered mortality cases during 1986 ranges from 400 to 1200 hens, according to locations. In some areas the disease reaches truly epidemic proportions.

Once detected at a location, it spreads very rapidly because on the one hand, hens are raised in the open and on the other, the peasants rush to market those still alive and apparently not affected by the disease.

Among industrial and semi-industrial poultry producers, the disease is well controlled. They apply appropriate prophylaxis. However, in some poultry enterprises, hygiene measures are not strictly enforced, giving rise to all kinds of diseases.

d. Parasitoses

Parasitic symptoms show up more frequently during the dry season when animals are undernourished. Some mortality cases were observed as follows:

1. around ODVA:	13
2. Perisse (Gonaives):	18
3. Fonds Parisien:	14
4. Tabarre:	2

Usually goats are the most affected animals. In general, besides the observed mortality cases, the evaluation of damages caused by internal and external parasites is difficult. It is known that through their mechanical, irritative, spoiliatory and toxic action, the parasites cause depreciation in the market value of the animals. Losses due to parasitoses are therefore important.

It must be pointed out that among the parasites, ticks are those which cause the most trouble. Being haematophagous they transmit piroplasmosis, particularly in the bovine herd. Many cases of mortality can be traced to that disease.

e. Special Considerations on Pig Health

Pig health deserves special consideration. Up to now the pigs are well adapted to the climate of the country and to the production systems of the peasants. In this latter aspect, it must be noted, however, that weaknesses in hygiene have been more or less the important sources of problems.

No serious pig disease has been reported so far. Strict surveillance of pig stalls and points of entry into the country is necessary to maintain this unusual sanitary condition. But certain disease cases have been registered for which well performed treatments can offer an immediate solution. Those diseases are:

1. Parasitoses:

- a. internal: Ascariasis, strongylsosis
- b. external: Gall

2. Piglet diarrhoea: neonatal, post weaning

3. Abscesses: generally due to trauma.

4. Agalactia: principal cause of which could be lack of hygiene.

Besides these diseases, other problems are found. The following are stressed:

1. Loss of piglets due to lack of assistance during birth delivery.
2. Some cases of abortion and still birth, due probably to under-feeding.
3. Numerous cases of piglet death due to crushing, noting that maternity wards are scarcely used in pig stalls.

It must be pointed out, though, that most of the problems addressed in this section, are not intractable. Only the means to control them are lacking.

Activities Carried Out During The Period

Activities undertaken during 1986 are well below our technical capabilities and only proportional to available resources (Table 1). Furthermore the socio-political situation has drastically hampered performance. Lots of efforts were pledged but accomplishments remain weak due to difficulties encountered in the field.

Remarks

1. Table 1 is not complete and represents only part of the work carried out. Many data are lacking, especially those concerning treatment of pigs for various causes: lameness, tooth cutting, iron injection, castration, abscesses and others.
2. To vaccinate against the New Castle Disease, many technicians had to buy their own vaccines outside the AHS. In some cases, the quantity of vaccine applied can be found in their reports.

3. Vaccines against rabies and anthrax were available to the AHS only by the end of December 1986. Vaccination before that date was performed using leftovers of the preceding year.
4. Only one seminar for training could be carried out, thanks to the collaboration of PAHO-WHO. For lack of funds the other planned seminars were reprogrammed for the year 1987. It's doubtful that they will take place.

/...

TABLE 1 RESULTS OF ANIMAL HEALTH ACTIVITIES

October - December 1986

ACTIVITY	DISTRICT													
	CAYES	JEREN	F.N.	PT.G	JACHEL	B.ANGE	P.N	P.S	BELL	HIN	ST.N	SON	CAP	P. DE I
Anti Anthrax Vaccination	8.500	12.000	7.850		300		2.200	50		1.500	50		500	
Anti Rabies Vaccination	50		1.500	1.000	3.800		1.850	9000	2.000	3.000	8.000		5.000	
							10.630							
ED Vaccination	16.100	12.035	2.039	4.651	1.591	2.018	5.895	2124	2.835	1.982	2.313	5.874	9.510	2.716
Internal Parasites ¹	5.357	2.967	2.198	2.589	2.951	1.031	7.714	9067	2.912	1.603	3.114	5.098	4.877	2.119
Internal Parasites ^{1/}	12.863	4.511	1.136	7.952	1.356	814	3.701	3804	1.110	713	2.317	2.519	2.659	1.911
Breastitis Treatment	518	345	210	425	697	342	978	652	545	534	762	923	865	728
Dysentery Diarrhoea ^{1/}	1.097	921	719	836	1.157	629	1.292	1183	635	741	978	1.074	1.123	732
Reverse Treatments	5.406	4.068	2.791	3.748	3.871	2.718	7.513	5819	4.177	3.824	3.509	4.819	5.830	3.872
Faecal Tests			51	87			732	99		13				
Blood Tests	24		23			32	151	15	23	126		29		

^{1/} Treatment

VETERINARY DIAGNOSTIC LABORATORY REPORT - GUYANA

by

Dr. Herman Reid

During the two years since the first LABANTILLAS Meeting in Port of Spain, the Veterinary Diagnostic Laboratory experienced mixed fortunes. In 1984 two staff members benefitted from short 2-3 months CIDA sponsored fellowships in Trinidad & Tobago and Canada in serology and bacteriology respectively. Two more staff members were scheduled to proceed on similarly sponsored fellowships in clinical pathology and parasitology last year but these fellowships did not materialise. On the other hand two of the senior staff - the clinical pathologist and the pathologist - were lost through resignations. (The pathologist is still with the laboratory, however, on a part time basis). These losses were filled by two recently returned veterinarians who are presently functioning in the Clinical Pathology and Pathology Sections. It is anticipated that these veterinarians will receive post-graduate training in the near future. Four technicians left the laboratory to undergo further training at home and abroad.

The laboratory still has five sections as was stated at the last meeting, viz. clinical pathology, bacteriology, serology, parasitology and pathology, each being headed by a veterinarian except for the serology and bacteriology sections which are jointly headed by a microbiologist. A brief description of the activities of each section will now be given.

CLINICAL PATHOLOGY

Procedures conducted by this section are haematology, blood chemistry determinations (limited to Ca, P, Glucose, Ketones, B.U.N. and serum protein estimations) Urinalysis, Cytology, examinations for haemoparasites and semen evaluation. More training is needed, however, in the area of avian haematology.

The average number of samples processed per month over the past two years is 50, the highest monthly average being 77 in 1983.

The short shelf-life of blood chemistry reagents continues to be a problem in this section. Over the years we have received reagents which arrived already expired and those which have had a shelf-life of only 3-4 months after arrival. This situation has interfered with and reduced the section's diagnostic capability.

BACTERIOLOGY AND SEROLOGY

Diagnostic techniques were improved in this section partly due to the training received by the microbiologist who completed a 3 month fellowship at the University of Saskatchewan, Canada in late 1985. *E. coli* isolates are now capable of being typed to strains K 88 and K 99, and the former was isolated from porcine intestines during 1986. *Campylobacter foetus*, sub-species *intestinalis*, was cultured for the first time in early 1986 from bovine vaginal mucous, and again later in the year from preputial washings, with the aid of a visiting Cuban veterinary microbiologist. These isolations confirmed the presence of bovine campylobacteriosis in Guyana and its distribution will shortly be studied. Attempts were made to recover *Trichomonas foetus* from the same washings but these were unsuccessful largely because of the temperature fluctuations while the culture was being incubated. *Trichomonas foetus* is known in Guyana however and its isolation was attempted to test our ability to work with this organism.

Special staining techniques were used to observe *Treponema hyodysenteriae* in porcine faecal swabs but we were unsuccessful in detecting *Chlamydia psittaci* in impression smears of parrot spleen. Success also eluded us in the isolation of *Mycoplasma* sp. from pigs and poultry but we are continuing our efforts.

Procedures performed by this section are:

- Gram and Ziel Nielson staining
- Culture of the common animal pathogenic bacteria
- CM test
- Fungal culture.

There is still some difficulty in the culture and isolation of pathogenic fungi and further training of personnel is needed in this field.

Work in the serology section consists of:

1. The tube and plate test for *Brucella abortus*
2. Culture and agglutination tests for *Leptospira*
3. IFA tests for bovine anaplasmosis and babesiosis
4. The Coggins test for E.I.A.

Since some 3800 bovine sera reacted negatively to the Brucella test in 1981/82, all bovine sera submitted to this section are routinely screened and have been found to be negative to date.

3.

The indirect fluorescent antibody test (IFAT) is currently being performed on bovine sera submitted by IICA, from its Eastern Caribbean Member States. This study is part of a programme for the control of ticks and tick-borne diseases in these countries.

The average monthly output from these sections was 66 and 16 samples processed respectively.

PARASITOLOGY

The most common technique performed in this section is the examination of faecal samples for evidence of helminths and protozoa. Over the years most of the samples submitted were of canine origin but during last year there was an increase in faecal specimens from ruminants. The results of these examinations show that *Ancylostoma caninum* is the most common intestinal nematode of dogs, although *Dirofilaria* appears to be equally common in the circulatory system. It was also found that sheep and goats carry a fairly heavy burden of G.I. nematodes throughout the year when compared to cattle.

Techniques carried out in this section are:

1. Examination of faeces by flotation, sedimentation and the Baermann technique
2. Preserving and identifying ticks, mites, lice and some flies
3. Recovery and identification to genus of intestinal nematodes
4. Faecal culture.

The average monthly number of specimens processed was 80.

PATHOLOGY

Procedures conducted in this section, apart from post-mortem examinations, are:

- a. Fixation of tissue, including bone, for histological examination.
- b. Special staining techniques for fungi, acid fast Bacilli and spirillar organisms, e.g., Warthin starry stains.

Significant diseases diagnosed in this section during the intervening two years were as follows:

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Poultry

A number of outbreaks of chronic respiratory disease (CRD) in broilers on East Bank and East Coast Demerara, resulting in an almost complete shutdown of some of the larger poultry farms. On another farm *Aspergillus* sp. complicated the CRD.

In early 1986 heavy losses occurred in broiler chicks from what was later diagnosed as the malabsorption syndrome. Deaths were initially thought to be due to Newcastle Disease, Avian Encephalomyelitis and Gumboro Disease as was suggested by the clinical signs. Specialists were requested from Agrotech in Miami and from the University of Georgia by the local feed manufacturers, and after the laboratory examination of specimens in the USA, a diagnosis of malabsorption syndrome was made. Other diseases involved in the outbreak were Newcastle Disease and Gumboro Disease.

Mysterious deaths were reported in Kunchen ducklings between 2-6 weeks of age following ataxia, recumbency and death. Histological sections sent to the University of Georgia yielded inconclusive results.

Cattle

In 1985 and 1986 paralytic rabies was diagnosed histologically and appropriate steps were taken to prevent further loss. Dermal bovine lymphosarcoma was also diagnosed for the first time at the laboratory. The bovine leukosis study has already been dealt with in the country report.

Dogs

A serious outbreak of canine distemper occurred in Georgetown during the first half of 1986 and was confirmed histologically at the laboratory. Dogs affected were those that were either unvaccinated of all ages or adults that were vaccinated only as puppies. The disease later spread to New Amsterdam, a town some 70 miles East of Georgetown.

Wild Animals

Thallium Sulphate poisoning was suspected in several birds and animals at the Georgetown Zoo during the latter half of the year and tissues submitted to the Government Analyst Department were found to contain levels of Thallium Sulphate. Later events showed that the contamination of food at the Zoo may have arisen from the indiscriminate use of rat bait containing Thallium Sulphate.

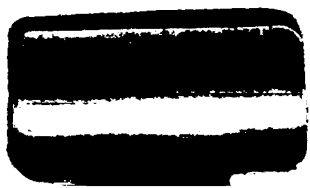
Research

Each laboratory section undertakes a research project at the beginning of the year, most of which are designed to run for a maximum period of one year, but can go beyond as may be

5.

necessary. Some of these projects were not completed because reagents ran out or were spoiled because of power outages. Last year's power outages delayed the start of those planned for that year and some were postponed to 1987. Projects in progress or about to commence are:

1. Small ruminant trypanosomiasis - a study of the distribution and prevalence on the coast.
2. The determination of some haematological parameters of clinically normal dairy cattle.
3. Prevalence studies of bovine anaplasmosis and babesiosis in the Eastern Caribbean utilizing the I.F.A. test.
4. Avian mycoplasmosis - serological distribution of *Mycoplasma gallisepticum* and *M. synoviae* in coastal broiler farms. Attempts are also being made to culture the organism.
5. Tuberculosis and Stephanuriasis at the Georgetown Abattoir and in Guyana.



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