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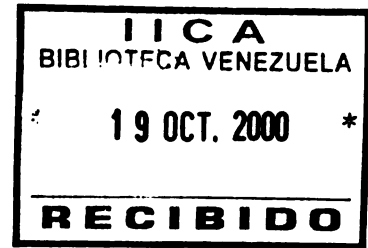


A DIAGNOSIS OF AGRICULTURAL HEALTH IN JAMAICA

Kingston, Jamaica
July 1999

IICA OFFICE IN JAMAICA





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ISSN 0257-4746

A2/JM-99/04

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INTRODUCTION

In its efforts to assist in the process of modernization of the agricultural sector in Jamaica, the Inter-American Institute for Cooperation on Agriculture (IICA) facilitates the production of studies which can provide a basis for decision making in the sector. This document prepared by Dr. Florence Young, on a diagnosis of agricultural health in Jamaica, provides a contribution to the current efforts designed to develop a strategy for improving agricultural health services to Jamaica.

The office acknowledges the constructive comments of Dr. Sandra Vokaty, IICA's Regional Agricultural Health Specialist in the production of this document.

I hope that you will find this information useful in these efforts.



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Dr. Chelston Brathwaite
IICA Representative in Jamaica



A DIAGNOSIS OF AGRICULTURAL HEALTH IN JAMAICA

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A DIAGNOSIS OF AGRICULTURAL HEALTH IN JAMAICA

I. BACKGROUND

The new dynamics of international agricultural trade are forcing countries to make the necessary changes and adjustments to their official animal and plant health services. The Agreement on the Application of Sanitary and Phytosanitary Measures is binding for all WTO members and provides the guidelines and requirements related to agricultural health in agricultural trade.

The SPS measures seek to protect:-

- 1) human or animal health from risks arising from additives, contaminants, toxins or disease-causing organisms in their food.
- 2) human life from plant or animal-carried disease (zoonoses).
- 3) animal or plant life including fish and wild fauna, as well as forests and wild flora from pests, diseases or disease-causing organisms and;
- 4) a country from damage caused by the entry, establishment or spread of pests.

However, protection for the environment *per se* consumer interests and animal welfare are not covered by the SPS agreement.

The agreement has implications for all relevant laws, regulations, requirements and procedures including, *inter alia* end product criteria; processing requirements; quarantine; certification; inspection; testing; sampling procedures and methods of risk assessment; and packaging and labelling requirements directly related to food safety. These stricter measures can be justified scientifically and technically.

Under such conditions for Jamaica to access international markets and compete successfully and to be able to certify the quality of imports and to evaluate the potential threats of pests and diseases associated with imported food to local production, its animal health, plant protection and food safety systems have to be improved.



II. LONG-TERM OBJECTIVE

The long-term objective in modernizing the agricultural health in Jamaica is:

- To provide the necessary agricultural health and food safety systems so that animal and plant products for export can meet the sanitary and phytosanitary requirements to compete successfully in international markets.
- To ensure that imported food is safe for consumers and free from pests and diseases that may threaten local agricultural production.

III. BASIC STRATEGY

The basic strategy for achieving this objective is:

- To upgrade the infrastructure, organization and operations of the agricultural health systems to comply with international commitments.

This involves not only a responsibility of the public sector but the private sector as well.

IV. NATIONAL AGRICULTURAL HEALTH SYSTEMS

A agricultural health system should not be limited to the actions that are executed by government but instead all relevant players should contribute to the various activities. The involvement of Private sector agencies should be considered in providing services that are critical to the efficiency of the system which are unavailable in the specific government agencies. Likewise, services existing in unrelated government agencies should be utilized where feasible. The need to create operations that are broad-based and addressing all possible aspects of agricultural trade should be instituted.

Thus members of the system should include:

- Agricultural Health Services Directors;
- Producer Organizations leaders;
- Exporters of Agricultural Products;
- Agri-business Associations leaders;
- Rural Communities leaders who promote and support related actions;



- * **Health Certification**
live animals
meat, fish and byproducts
meat processing
dairy plants
- * **Artificial Insemination**
- * **Regulatory Functions**
 - disease control of Brucellosis and Tuberculosis and Leptospirosis
 - eradication of Screwworm
 - importation of live animals and meat, fish and byproducts are controlled through a permit system

Animal Health services are provided throughout the island at the parish level by a Veterinary Officer and Animal Health Technicians. Direction and Administration is provided through a Director and seven (7) Veterinary Officers with responsibility for specific programme areas.

A quarantine station is operated in the vicinity of the airport in Kingston

A draft act, Meat and Meat Products and By-Products (Inspection and Export) is to be promulgated soon. It seeks to provide for the inspection and certification of meat, meat products and meat by-products for export to specified countries.

II. Plant Quarantine/Produce Inspectorate

Provides plant quarantine and produce inspection services for agricultural produce entering and leaving the island under The Plant (Quarantine) Act, 1993 and The Agricultural Product Act, 1926.

Provisions to deal with the introduction of exotic pests and diseases by;

- * Ensuring that plants and plant material entering and leaving the island are free from pests and diseases ;
- * Ensuring that the quality standards approved by the Ministry for produce to be exported are maintained
- * **Regulatory Functions**
 - Issuance of permits for imports
 - Issuance of phytosanitary certificates for exports
 - Certifying quality of produce according to standards



- Production of Orders as strategies to combat certain problems e.g. Papaya ringspot virus
- * Preclearance Programme
 - Farm assessment and monitoring
 - Inspecting and certifying consignments to be free of pest and diseases according to USDA/APHIS standards in order to expedite rapid movement of perishable produce entering the US markets which will require no further inspection on arrival.

The services are provided by a complement of 19 inspectors under the direction of the Chief Quarantine Officer supported by a deputy and two (2) entomologists.

Both airports and seaports are serviced in addition to wharves in St. Mary and Portland. Monitoring of cruise shipping piers is also carried out.

The inspection of packing houses for registration and routine monitoring is another function.

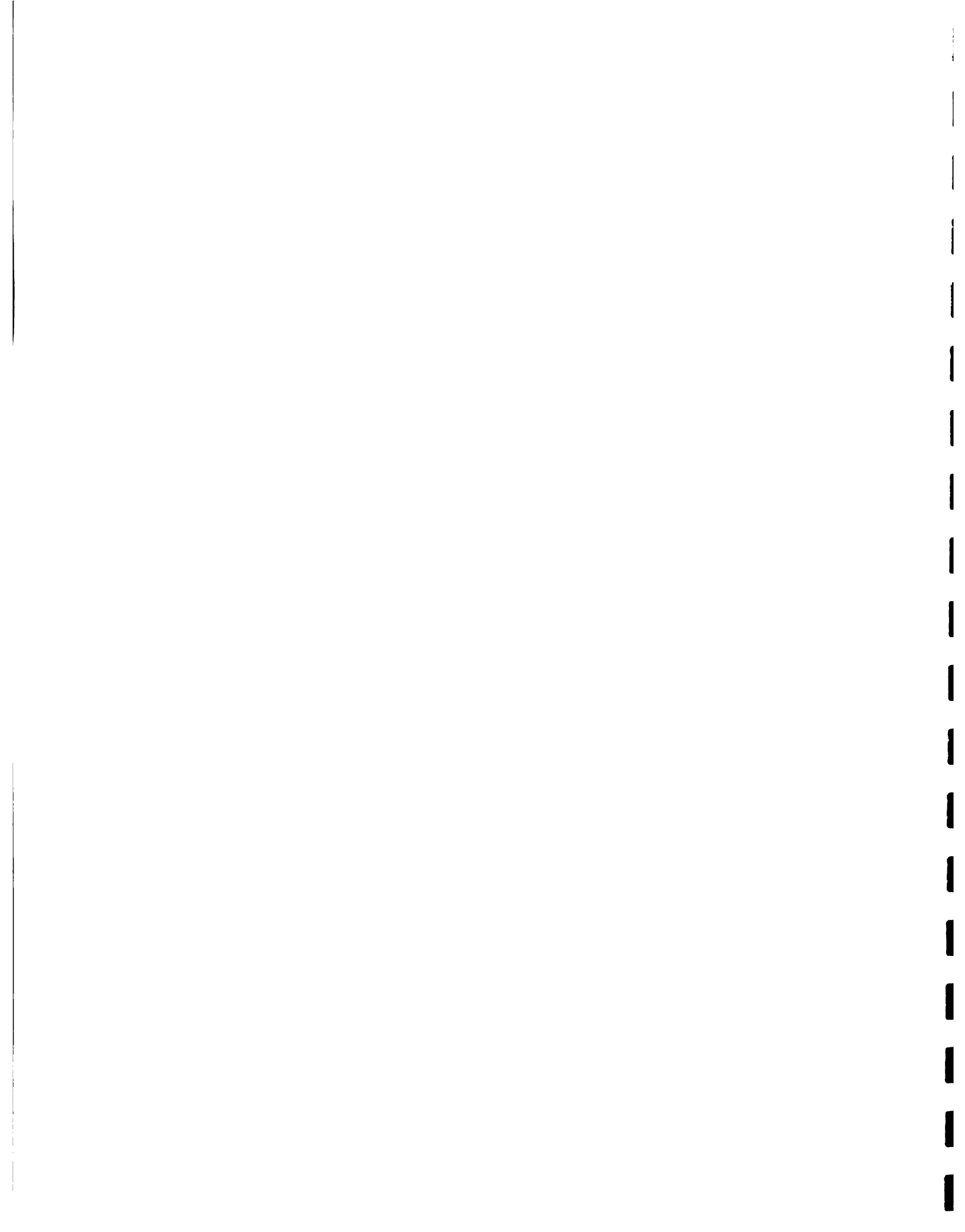
111. Plant Protection Services

Research and Development.

Within the Research and Development Division programme there is a Plant Protection and Post-Entry Quarantine sub-programme which contributes to the generation of cost-effective technology for improvement of agricultural production. In addition it provides:

- pest identification,
- diagnosis of plant health problems,
- advice to farmers on plant protection matters,
- quarantine of plant accessions until they are certified clean for release and administration of the Bees Control Act with the following regulatory functions:
 - apiary inspection
 - apiary registration
 - control of foul brood disease.

The functions are executed under the direction of a Principal Research Director and guidance of the Chief Plant Protection Officer. A cadre of eight (8) technical officers perform the duties throughout the island with the assistance of three (3) assistants.



Rural Agricultural Development Authority

At the field level various activities are performed to achieve the two (2) following objectives

- * to reduce crop losses due to pests/diseases through safe, efficient and sustainable management systems
- * monitoring of pest/disease incidence in preparedness for the management of exotic and existing organisms

The service is provided by three (3) technical officers, one (1) at the national level and one each at the two zonal levels. These officers work through 60 extension officers and 60 agricultural assistants.

HEALTH MINISTRY

1. Public Health Service

The Ministry of Health's primary role in food protection is in the area of food sanitation and safety. The statutory responsibilities of this ministry concerning foods are contained in the Public Health Act, 1974 and the Food and Drug Act.

The two laws overlap and this creates conflicts for role definition. Whereas the Public Health Act provides for a decentralized administration giving responsibility for food control to each parish, the responsibilities under the Food and Drugs Act are centralized.

The responsibilities include:

- directing matters related to food hygiene,
- regulating the use of additives in food,
- regulating the importation of food,
- milk and meat inspection
- investigation of outbreaks of food-borne diseases
- coordinating the analysis of submitted samples,
- analyzing milk samples for standard estimation of bacterial load,
- analyzing water samples for coliforms,
- providing expert input to committees on standards related to public health,
- facilitating enforcement of food laws to assure that products are safe and wholesome.



Both acts cover safety aspects of food production, handling and storage but the Food and Drugs Act provides specific clauses for the regulation of food additives as well as the labeling and advertising of foods. The Public Health Act addresses the control of pests through the cleaning, disinfection and maintenance of premises.

Regulations under the Public Health Act are:

Public Health (Food Handling) Regulations,

Public Health (Butcher's) Regulations

The Public (Meat Inspection) Regulations

Public Health (Nuisance) Regulations

Public Health Inspection services is provided by 300 Public Health Inspectors distributed between Head Office, the four (4) regions and the 13 Health Departments islandwide.

The veterinary (vet) public health section operates separately under a director for veterinary public health who is responsible for policy and the field activities are coordinated by a Veterinary public health officer. At the field level there are four (4) regional vet public health officers and 14 parish vet. public health officers. They provide the technical input in:

- prevention and control of zoonotic diseases
- food hygiene of animal origin - milk, meat and sea foods,
- inspectorate work with other agencies,
- licensing of butchers,
- standards of abattoirs,
- food processing plants,
- animal health certification on dairy farms,
- sanitation of milking parlors,
- milk samples - bacteria and chemical, and
- on-going training in HAACP principles.

11. Pesticide Control Authority

The Pesticide Control Authority (PCA) is a statutory organization assigned to the Ministry of Health with a mandate to regulate and control the pesticide industry under the provisions of The Pesticide Act, 1975. The Act contains some food related provisions.



The responsibilities of the PCA are to:

- * register pesticides
- * license persons to import or manufacture registered pesticides
- * authorize persons to sell restricted pesticides
- * register premises in which a restricted pesticide may be sold
- * license pest control operators
- * consider and determine applications and deal with all aspects of importation, manufacture, packaging, preparation for sale, sale, disposal and use of pesticides

- * carry out all functions pertaining to the regulation of pesticides including - pesticide analyses for quality control and residues in food and water, monitor advertising and provide a source of information for the public.

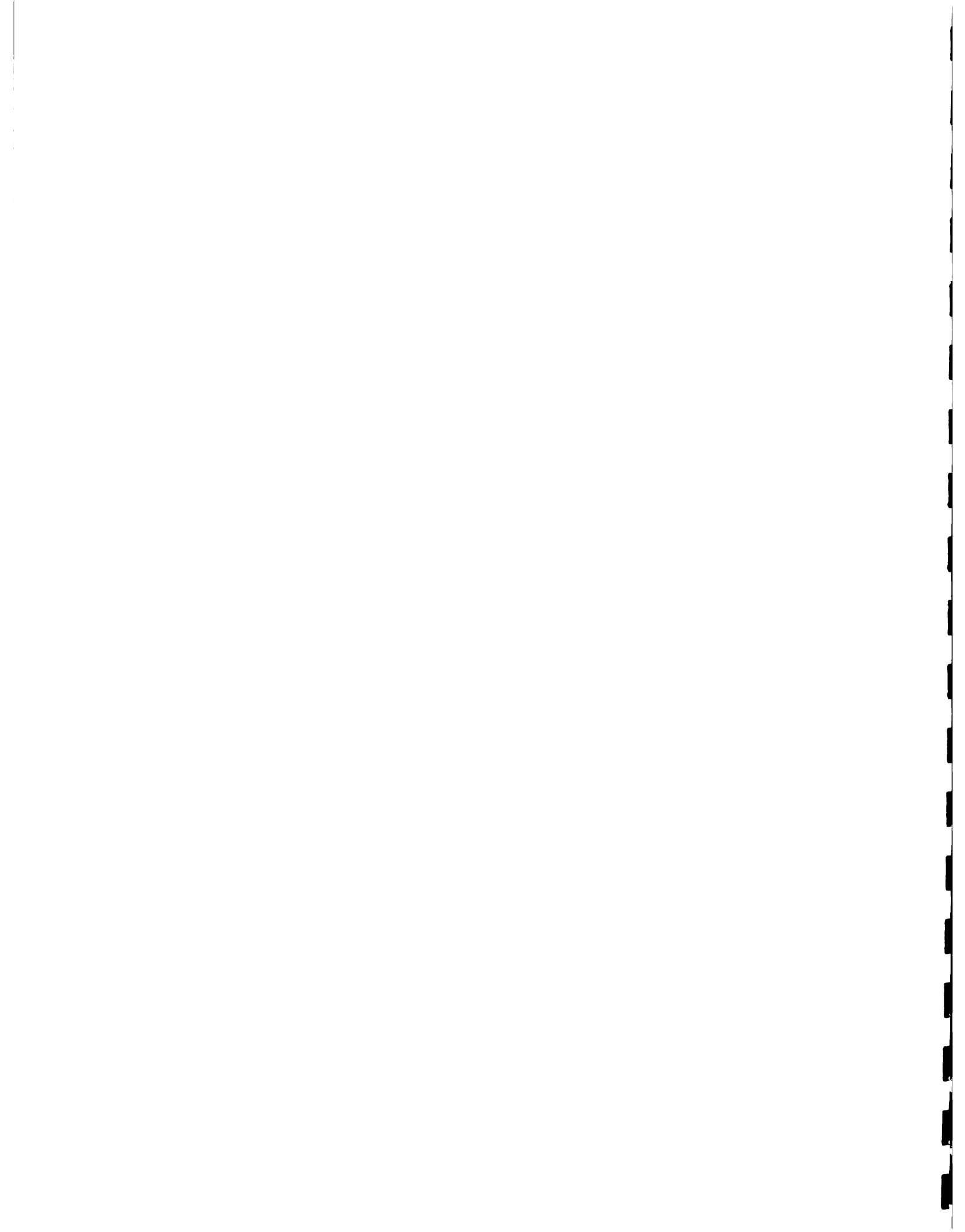
PCA is administered by a Board formed by representatives from the following organizations:

- Chief Medical Officer (Min. of Health) - Chairman
- Rural Agricultural Development Authority
- Plant Protection Division (R&D Min. of Agriculture)
- Pharmaceutical Services Division (Min. of Health)
- Government Chemist (Min. of Health)
- Food Storage and Prevention of Infestation Division (Min. of Industry)
- Natural Resources Conservation Authority
- Attorney General's Office
- Veterinary Services Division (Min. of Agriculture)
- University of the West Indies.

The technical operation is carried out by a Registrar who reports to the Board and is supported by two (2) deputy registrars and one Industry Inspector.

Information on pesticides is made available to the public in an effort to maintain the health of the nation and the integrity of the environment.

Through import, registration and licenses fees financial support is obtained to augment governments subvention.



111. Government Chemist Department

The Government Chemist Department located within the Ministry of Health, is a national authority in the analysis of drugs, foods and pesticides. In addition it provides:

- certificates of analyses
- expert testimony in court concerning the findings of its analyses
- cooperates in the development of new and revised standards
- advises on the possibility of a widespread contamination and food safety problem based on the analytical findings of samples.

COMMERCE AND TECHNOLOGY MINISTRY

1. Storage and Prevention of Infestation Division

The mission of the division is to "ensure the safety and wholesomeness of foods and feeds entering commerce", both locally and internationally. It is responsible for the administration of the Food Storage and Prevention of Infestation Act, 1958. Its primary role is to prevent stored food losses. This is achieved by providing services, to individuals and organizations with durable and perishable agricultural products by preventing stored food and animal feed losses through :-

- * the control of storage infestation
- * contamination with toxic chemicals, rodent filth and
- * fungal infection.

The functions of the division includes:

- inspecting all premises involved in the sale, storage or manufacture of foods,
- inspect any vehicle used for the transporting foods or feeds,
- examining any food/feed container or food/feed kept for sale, stored or manufactured
- seizing and detaining any infested food/feed,
- fumigating infested food /feed,
- directing the prevention of infestation,
- condemning, destroying or disposing of any infested food/feed that cannot be reconditioned,
- prohibiting and enforcing regulations concerning the prevention and mitigation of infestation



The Division also provides training and licensing for pest control operators and registering pest control premises.

The available services are provided through seven (7) operational units namely:

Inspectorate and Pest Control	- 4 Inspectors
Entomology Laboratory	- 3 Scientists
Pesticide Residue and Mycotoxin	- 5 Scientists
Rodent Biology and Control	- 2 Scientists
Microbiology	- 2 Scientists
Post Harvest Technology	- 2 Scientists
Training and Information	- 3 Scientists

11. Bureau of Standards

The Bureau is the sole agency with authority to promulgate national standards and is recognized internationally as the certifying body. The statutes under which it operates are:

The Processed Food Act, 1959

The Standards Act, 1968 and

The Weights and Measurement Act, 1976.

The first two acts cover aspects of food safety in addition to quality, composition and physical characteristics of foods.

The Processed Food Act addresses food safety as is related to processed indigenous fruit and vegetable products and processed meats for which grades or standards have been prescribed.

Existing regulations address:

- sanitary condition of workers
- inspection of processing techniques employed
- registration and regular inspection of processing establishments
- packing in prescribed containers
- correct labelling.



There is a National Food Protection Committee which was instituted out of the Ministry of Health and chaired by the Chief Medical Officer. The membership consists of representatives from both public and private sector entities and also from regional/international organizations. The objective of the committee is to provide inter-agency co-ordination:

Its priority areas are:

- * Public Education - material development
- * Training Manual
- * Food Inspection
- * Staff Training
- * Food Vending Hygiene
- * Epidemiology of food borne diseases
- * Legislation and
- * Research.

IV .2 Limitations of the national agricultural health system.

- A review of the existing food laws which are about ten (10) in number will show that Jamaica does not lack the legal framework but the drawback resides in the absence of necessary regulations and the power for enforcement.
- There is also the need to upgrade the pieces of legislation and bring them to a level of compliance with international agreements and requirements.
- The lack of financial support and trained personnel in some areas is also a limitation.
- Overlapping of responsibilities among agencies and the absence of formal collaboration is another short-coming.
- Coordination at the national level by a legal body with the authority to effect changes and direct actions would contribute greatly to a more efficient and holistic national system.
- The system should be driven and directed by a policy which reflects both national needs and international standards

IV .3 Priority plant pests and diseases which the system must address.



There is a long list of pest and disease problems that are of concern to the various stakeholders in the agricultural sector.

They are specific in the case of:-

- **Coconut Lethal Yellowing**
- **Citrus Tristeza Virus**
- **Coffee Berry Borer**
- **Black Sigatoka**
- **Ginger Rhizome Rot**
- **Sweet Potato Pest Complex**
- **Yam Weevil**
- **Hot Pepper Midge Complex**
- **Bemisia Whitefly/geminivirus complex of vegetables**

and in general in the case of ;

- **Red Spider Mites**
- **Anthracnose**
- **Nematodes and**
- **Fruit Flies**

However, only a set number can be addressed nationally utilizing twenty (20) criteria.

The problems listed were prioritised and the top four are:

- **Black Sigatoka**
- **Coffee Berry Borer**
- **Bemisia/Geminivirus Complex**
- **Hot Pepper Midge Complex**

IV .4 Priority animal disease problems which the system must address.

From a food safety perspective and a quarantine approach to exotic pests, the animal disease that must be addressed are:

- **Bovine Brucellosis and Tuberculosis**
- **Screwworm Eradication**



- **Leptospirosis**
- **Mastitis**

Jamaica is seeking to obtain recognition from the international regulatory organization for animal health disease of free status for Brucellosis and Tuberculosis

V. THE JAMAICAN SYSTEM - STRATEGIC AREAS FOR ACTION

The critical strategic areas of agricultural health are as follows:-

- Upgrading the infrastructure and operations of the national health systems in order to comply with sanitary and phytosanitary health standards as dictated by WTO.
- Strengthening and developing leadership skills by the training of managerial personnel.
- Introducing new SPS standards and harmonizing technical procedures with trading partners.
- Upgrading national legislation and regulations so as to comply with international agreements.
- Identifying new or emerging problems that could pose a serious threat and preparing plans to prevent or control them.
- Strengthening capabilities to undertake epidemiological surveillance and risk analysis.
- Producing responses to agricultural health emergencies.

VI. PRIORITIES LINES OF ACTION FOR IMPROVING JAMAICA'S AGRICULTURAL HEALTH SYSTEM

1. Greater participation by agricultural producers, agri-businesses and private sector professionals and institutions in the execution of agricultural health programmes and actions can be achieved by the establishment of two multi-sectoral advisory committees. One to deal with animal health and food safety and the other to deal with plant protection and food safety. Each committee will plan and direct the execution of the respective agricultural health programmes. At this stage two committees are



necessary because animal and plant products are dealt with separately, but with time, one multi-sectoral advisory committee should be the goal.

2. The inspection and certification by accredited professionals and from approved laboratories is required. Therefore systems have to be put in place to obtain accreditation of agents and facilities. Users of the facilities and services such as inspection and certification, should pay users fee which will be used to maintain the services.
3. Upgrading the animal and plant quarantine legislations and regulations in order to adapt them to the new international standards. This should be approached in the context of a clear understanding of the Agreement on Sanitary and Phytosanitary measures of WTO and also with the knowledge of all other national legislations which will impact on the outcome. The production of legislation should be embodied into a total package offering measures for the effective implementation of the Agreement.
4. The production of manuals which will reflect guidelines for the various activities from production, paying special attention to the integrated approaches to pest and disease control to harvesting, grading and packaging followed by inspection and certification promoting the scientific criteria upon which the issuance of certificates are based.
5. National surveillance programmes are necessary to generate information on pests and diseases in a country forms the basis for early diagnosis. New pests and diseases that if introduced or established, could become a sanitary or phytosanitary problem. Thus the country needs to be aware of emerging agricultural health issues in trading partners that could represent a serious risk and be prepared with mechanisms or systems for implementing emergency actions.



Active epidemiological surveillance mechanisms involving new methodologies for conducting statistical samplings and technologies for detecting pathogens or pests are necessary to determine the presence of a disease or pest and the seriousness of the problem.

- 6 Pest Risk analysis is fundamental to the application of sanitary and phytosanitary measures to international trade. Risk analysis includes risk assessment, risk management and risk communication. It should be a scientific process utilizing methodologies to provide qualitative and quantitative analysis of animal health and plant protection risks.

The establishment of integrated units to deal with epidemiological surveillance, risk analysis and responses to animal health and plant protection emergencies is desirable

7. Modernizing the infrastructure and operations of health control mechanisms the establishment of Hazard Analysis and Critical Control Points (HACCP) systems where required and organizing laboratories with the capabilities to conduct analyses of agro-chemical residues and veterinary products and microbiological analyses. Harmonization of technical procedures such as diagnostic testing, residue analysis, inspection methods and quarantine treatments will also facilitate the international trade of agricultural products without placing at risk - human, animal or plant life and health.

VII. COMPLEMENTARY EFFORTS IN THE AREA OF AGRICULTURAL HEALTH - THE CARIBBEAN FOOD SAFETY INITIATIVE

In an effort to assist CARICOM members to develop new market opportunities and meet their international obligations, a Caribbean Food Safety Initiative (CFSI) has been implemented. In order to design an effective strategy for achieving a successful food



safety system, the CFSI consists of three (3) phases namely, Issues Identification, Needs Assessment and Strategy Development.

The first phase, Issue Identification was started in September 1998 at a workshop in Barbados.

Discussions based on a conceptual framework of a successful food safety system which includes a regulatory framework, technical infrastructure and education and outreach components, identified "ideal" or "desired" food safety systems and requirements for those systems. This outcome provided guidance for the second workshop that was held in Jamaica, September 13, 1998.

The second phase, Needs Assessment, carried out by a team of technical experts who conducted an assessment of CARICOM Member States animal, plant and human health systems. The team visited each state in order to formulate science-based recommendations for future infrastructure development, training and technical assistance progress. The document produced at the end will set the basis for the implementation of holistic, interactive food safety systems in the Caribbean. The Assessment phase was completed by March 25, 1999.

The third phase will deal with the strategy for implementing the recommendations.

The objective of a food safety system is to provide confidence that the food produced, whether fresh or processed, is safe for human consumption. The goal is to prevent residue or minimize risks associated with the consumption of food. The entire agri-food chain from production through processing, storage, distribution, marketing and final consumption by the consumer should be included

The forthcoming recommendations of CFSI will reflect the strengths and weaknesses of each member state in a very systematic way, thus any proposal for the modernization of Jamaica's agricultural health should benefit from its findings.



VIII A ROLE FOR INTERNATIONAL TECHNICAL ASSISTANCE ESPECIALLY AS IT RELATES TO SPS IN THE WTO AND FTAA NEGOTIATIONS

To provide exposure of legislation, mechanisms and procedures that are already in place and operating effectively in countries, both developed and developing, to key personnel who would be the implementers of change in the national system. So that the necessary adoption and adaption is fully understood and appreciated at the operational level the identification of weak areas in the national system should be given priority attention.

The exchange of information on SPS should be facilitated.

It must be recognized that the process should be phased and follow-ups be incorporated into whatever scheme is decided on.

Formal training, short or long term, will be necessary to raise the technological level in some instances thus expert advice should be available to guide the recipients along the right path.

The matter of financial support to achieve the overall goal is another important element.

1X. THE WAY FORWARD - A STRATEGY FOR IMPROVING JAMAICA'S AGRICULTURAL HEALTH SYSTEM.

New trends such as the globalization of economies and markets; greater concerns of the quality and safety of foods for human consumption; protection of the environment from agricultural production inputs and the commitments to international agreements, are forcing governments to reconsider their approaches and actions in respect of agricultural health systems. The development of a national agricultural health and food safety policy should be the starting point for Jamaica and which would provide the necessary direction for the various actions that are being carried out by the three (3) ministries of government.



After enunciation of a national policy, an Action Plan should be developed which would present the framework for the development of a modern national agricultural health system for Jamaica. Such a system would include all participants involved in agricultural production and public and private sector professionals in the field of animal health, plant protection and food safety. The fundamental objectives and the principle functions should be clearly stated so as to achieve the integrated contribution of all participants in the system.

On completion, the plan should be effectively shared with all stakeholders and the necessary adjustments made to produce a final draft. Finally a work programme should be formulated and the final document shared with the public to achieve understanding and support. The public has to be fully informed because the outcome will impact greatest on them and the success of the system will depend on their co-operation.

The existing National Food Protection Committee could be upgraded and expanded into a Food and Agricultural Commission which would be the enabling mechanism to produce the national policy, action plan and work programme to modernize agricultural health in Jamaica. **A model for a modern national agricultural health and food safety system has been produced by IICA Technical Consortium Agricultural Health and would become a valuable document to any working group.**



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PROFESSIONAL PROFILE

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PROFESSIONAL OBJECTIVES

- ❖ COORDINATE AND MANAGE SCIENTIFIC DEVELOPMENT
- ❖ CONSULTANT ON CROP PRODUCTION AND PROTECTION
- ❖ RESOURCE PERSON ON ENVIRONMENTAL PROJECTS ESPECIALLY CHEMICALS IN THE ENVIRONMENT
- ❖ COORDINATES AND CONDUCT TRAINING COURSES AND AGRICULTURAL PROJECTS

QUALIFICATION SUMMARY

- ❖ PH.D., PLANT PATHOLOGY, UNIVERSITY OF FLORIDA, GAINESVILLE, FLORIDA, 1971
- ❖ M.S.C., BOTANY (MYCOLOGY), BROWN UNIVERSITY, PROVIDENCE, RHODE ISLAND, 1966
- ❖ B.S.C., BOTANY, HOWARD UNIVERSITY, WASHINGTON D.C., 1964

PROFESSIONAL EXPERTISE

- ❖ OVER 20 YEARS EXPERIENCE IN AGRICULTURAL RESEARCH, EXTENSION AND EDUCATION
- ❖ EXPERTISE IN THE PHYTOSANITARY MOVEMENT OF PLANT MATERIAL, ESPECIALLY POST ENTRY QUARANTINE MANAGEMENT
- ❖ MANAGEMENT OF AGRICULTURAL RESEARCH PROJECTS
- ❖ SAFE USE AND MANAGEMENT OF PESTICIDES IN AGRICULTURE



PROFESSIONAL EXPERIENCE

MANAGEMENT AND ADMINISTRATION

- ❖ MANAGEMENT OF MY PERSONAL CONSULTING SERVICE
- ❖ HEAD, POST-ENTRY PLANT QUARANTINE FACILITIES, MINISTRY OF AGRICULTURE, BODLES RESEARCH STATION, OLD HARBOUR, JAMAICA
- ❖ PARISH MANAGER, ST. ANN LAND AUTHORITY, MINISTRY OF AGRICULTURE, JAMAICA
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