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FOOD SAFETY AND VALUE ADDED PRODUCTION AND MARKETING OF TROPICAL CROPS

Title: The Process towards the Development of an Improved National Food Safety System in Antigua and Barbuda

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THE PROCESS TOWARDS THE DEVELOPMENT OF AN IMPROVED NATIONAL FOOD SAFETY SYSTEM IN ANTIGUA AND BARBUDA

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ABSTRACT

In 1998, the need for improvements in the food safety system of countries of the Caribbean was recognized in a meeting of CARICOM Ministers of Agriculture in Jamaica. A properly functioning food safety system should ensure that all food consumed in a country, whether produced locally or imported and also food exported from that country, conformed to acceptable standards that would ensure the health and safety of the consumers. In Antigua and Barbuda in 2000, was set up an ad hoc National Food Safety Committee with the goal of ensuring that all food and water consumed in Antigua and Barbuda, whether imported, produced locally or for export, conform to acceptable standards to ensure the health and safety of the consumer. Some of the activities undertaken by this committee were: training of local food handlers & processors, farmers; mobilize updating of legislation on food safety; public awareness and education on safe food practices; improving the food inspection service. The local system is currently characterised by many different agencies, ministries and organisations with responsibilities for food safety, with very little coordination or collaboration. In the progress towards improving the food safety system in Antigua and Barbuda, it was recognised early that there was an urgent need to develop or revised legislation related to food safety. Over the last six years, the National Food safety Committee was lead agency for projects to develop a new Food Safety Act, revise Plant Health and Animal Health Acts. As well as, conduct numerous training in food safety and consultations on food safety matters. The next step is to decide on whether to move towards a coordinated agency or a centralised agency for food safety with an act to govern its establishment.

Key words: Food safety system, Imports, Local Products

INTRODUCTION

Antigua and Barbuda, along with uninhabited Redonda, is a twin island state in the eastern Caribbean, with a population of about 70,000 people. The main industries are tourism and financial services. Antigua and Barbuda has an international airport with direct daily services to countries such as Europe, North America and the Caribbean. The country also has a modern Deep Water Harbour in St. John's and can accommodate up to four large cruise liners at There is a marina in Jolly the same time. Harbour offering full services for small sailing vessels. The agriculture sector in Antigua and Barbuda contributes about 4% to the Gross Domestic Product (GDP), while tourism contributes over 40% to GDP (Government of Antigua and Barbuda, 2005). Antigua and Barbuda is a net importer of food and food products (Government of Antigua and Barbuda, 2005). The food safety situation in Antigua is of concern not only to the resident population, but also to the approximately 800, 000 visitors to the country (Statistics Division, Ministry of Industry and Commerce, 2005 year).

The importance of food safety is related to the fact that food borne diseases can affect production, loss of income due to illness and absenteeism, increased cost of medical care, reduced output capacity. In Table 1 reported cases of food borne illness average about 200 per year, however, there are many cases that are unreported. Visitors, if affected by food borne diseases, could experience reduced satisfaction of their vacation and reduced business productivity, reduction and loss of visitors for the country. The need for improving the food safety situation in Antigua and Barbuda is also demonstrated by the figures in Table 2. This report of inspections to food service establishment, such as restaurants, shows that there is still some work to be done, the percentages of food safety practices are below

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50% (Table 2) (be specific). In the approach to improving food safety in Antigua and Barbuda the farm/sea to table food chain is considered, since source of safe food is area of concern together with safe food handling, preparation and storage.

The legislative situation to put in place an acceptable food quality and assurance system is being addressed, but lack of trained human resource, infrastructure and equipment continues to challenge the process.

FOOD SAFETY SITUATION PRIOR TO 2000

National food safety legislative situation

Antigua and Barbuda had no dedicated food safety legislation. Food safety issues were handled under multiple legislations and were spread over numerous entities (Laudat et al., 2000). Two main acts governed food protection in Antigua and Barbuda: The Public Health Act (Laws of Antigua and Barbuda, Chapter 353, Revised Edition 1992) which is administered by the Ministry of Health with the accompanying rules and regulations; and the Animal International Movement of Disease Act No. 34 of The Ministry of Health, through the 1986. Central Board of Health, is responsible for administering the Public Health Ordinance, and also shares responsibility with the Ministry of Agriculture, Lands, Marine Resources and Agro-Industrv for administering the Animal International Movement of Disease Act. Regulations which impact food safety are:

- Food Regulations (Hotel and Retail Shops), made under section 98 (1) of the Public Health Ordinance, which deals with inspection of hotels and retail shops, cleanliness of premises, protection from contamination of articles intended for human consumption, and precautions against the spread of infection of communicable diseases;
- Food Selling in Open Air Regulations, made under Section 98 and 99 of the Public Health Ordinance, which deals with registration of persons selling food, protection from contamination of articles for sale for human consumption, and penalties;
- The Ice and Aerated Water Factories Regulations, made under section 87 (11) of the Public Health Regulations, which deals with factories to be registered, application for registration, inspection and registration of

factories, powers of entry, power to require factories to be kept in a sanitary condition, cleansing of bottles, siphons, etc;

- Market Regulations made under Section 140(2) of the Public Health Ordinance; and
- Slaughter House Regulations, made under Section 140 of the Public Health Ordinance.

The above laws and regulations were outdated and deficient and in need of revision and are the responsibility of the Ministry of Health. They did not address some critical aspects of food safety and control, hence created problems with enforcement. Regulations with regard to quality of irrigation water, worker hygiene and post harvest handling, storage and distribution were absent. Other laws that govern food protection and are administered by the Ministry of Agriculture include:

- The Fisheries Act, No. 14 of 1983 and the • Fisheries Regulations of 1990 comprise the main fisheries legislation. These are based on the harmonised legislation and regulations adapted by OECS member countries. Regulations of the European Union and of the United States of America have made it mandatory to adopt Hazard Analysis of Critical Control Points (HACCP) in the export of fish and in airline catering. There is presently no regulation that deals with the importation requirements for fish and fishery products. The Central Board of Health in consultation with the Fisheries Division and the Veterinary Authority is in the process of drafting regulations with respect to such imports;
- The Veterinary Act (1986) and the Animal (International Movement and Disease) Regulations (1993) provided the regulatory framework for animal health in Antigua and Barbuda. The Acts and regulations (Animal Importation Control Regulations and Animal Importation Prohibition Regulations) permitted the control of animal importation. regulation of movement, quarantine and surveillance to prevent the introduction of exotic diseases. The legislation, however, needed to be updated for compliance with the World Trade Organisation (WTO) Agreement on Sanitary and Phytosanitary (SPS) agreement, to which Antigua is a signatory. Other animal related regulations include: Diseases of Animals (Swine) Regulations, Foot and Mouth Disease

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Regulations, Milk Regulations and Slaughter House Regulations; and

• The Plant Protection Act, Cap 329 of 1941 and regulations based on the Act (1959) comprise the existing legislation governing the safety of plant produce and materials for consumption or other use. A Plant Protection Act has been drafted but has not been passed. This legislation was being modified to facilitate compliance with the SPS agreement. No regulations had been formulated.

Agriculture Health and Food Safety Status

There were several government departments with responsibilities for food safety, with roles and functions outlined below (departmental reports for National Consultation on Integrated Food Safety, 2001):

The Fisheries Division-Ministry of Agriculture

This Division is responsible for ensuring that fish processing facilities operate under sanitary Additionally the Division has the conditions. responsibility to ensure that all fish processing establishments know the requirements with regards to seafood regulations in the exporting countries and assisting in the compliance. The value of export of seafood products to Europe, USA, Canada and other countries is the largest contributor of the agriculture sector to Gross Domestic Product (GDP) (Statistics Division, Antigua and Barbuda, 2005 Year). A manual was developed on "Standard Procedural Manual for the Safe Handling of Live Lobsters in Antigua and Barbuda;" a similar manual was required for fresh and processed fish. The Division also had responsibility for training of fisher folk, sampling water used to store lobster, processing fish and for fish cleaning premises, to be tested periodically. The Division staff received regular training and two persons were certified as HACCP inspectors.

The budgetary allocation for seafood safety was minimal and needed to be increased. There was need for trained fish inspectors and public awareness programmes, as well as, better laboratory facilities with trained personnel to test seafood.

The Plant Protection Unit- Ministry of Agriculture

The Unit is primarily responsible for the prevention of the entry or spread within the country of pests and diseases of quarantine

significance. To undertake this, the Unit performed inspections at ports of entry for imports and exports of plants and plant products. The Unit had a regular surveillance program for pests of quarantine significance and provided training in integrated pest management and use of more environmentally friendly pesticides.

The budgetary allocation was low and accessing the funds was time consuming resulting in inefficiencies of the system. User fees have been proposed but are not yet on stream. There was urgent need for tertiary level trained staff in the relevant disciplines. Aside from lack of trained staff, there were insufficient numbers to properly carry the functions of the Unit. There was a laboratory with very minimal equipment to do some basic entomology work but the facility was inadequate for pathology work. Other aspects of plant protection work, for example rearing out of insects, could not be carried out.

The Veterinary and Livestock Division-Ministry of Agriculture

The main responsibilities of this Division is to take the necessary action for the eradication or control of notifiable diseases and other infectious diseases, to provide veterinary care for all livestock, to diagnose animal and poultry diseases, to give advice to the public on matters relating to animal health, husbandry and management and to train farmers in livestock production, disease prevention and control.

The Division had budgetary allocations for staff, facilities and equipment but this budget did not allow for equipping and running a laboratory. A new abattoir was being built. Antigua and Barbuda had no animal quarantine station.

Chemistry and Food Technology Division-Ministry of Agriculture

Working in close collaboration with the Central Board of Health, this Division is responsible for testing water quality, food products for shelf life determination, and some microbiological tests of food products and especially during investigation of food borne disease out-breaks.

Generally there were trained staffs, but not in sufficient numbers. Therefore the technicians carried out a wide variety of tasks and did not become specialists in any one area. There was need for more specialised equipment, reagents and other consumable supplies. The laboratory performed forensic work for the police department and soil analyses for agriculture, all

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in limited space with insufficient staff and equipment.

The Pesticides Control Board- Ministry of Agriculture

The Board has the responsibility of monitoring and control of pesticides imported, sold, distributed, stored and disposed in Antigua and Barbuda. The Board, working in collaboration with the Customs and Excise Division, monitors the entry of agro-chemicals and other pesticides into Antigua and Barbuda. The Board was working on appointing a registrar and formalising the registration of pesticides entering the country.

The Board does not have dedicated staff such as inspectors; hence it relied on the Plant Protection Unit for inspections. There was also no registrar and all of these reduced the effectiveness of the Board in carrying out its functions.

Antigua and Barbuda Bureau of Standards-Ministry of Trade

The main responsibility of the Bureau is to prepare and promote the adoption and implementation of standards relating to goods, materials, practices, and operations, to promote research in relation to specifications, establish or designate laboratories and testing facilities and provide for the examination of services, processes and testing facilities; declare standards and keep them under review.

The Bureau had no inspectors nor did it have a laboratory. The budgetary allocations prevented infrastructure development. Nine mandatory standards had been drafted and submitted to Ministry of Legal Affairs for passing into law. Antigua and Barbuda is a member of Codex Alimentarius Commission (Codex), and the Bureau is the contact point.

Central Board of Health-Ministry of Health

The Central Board of Health (CBH) is charged with the responsibility of administering the Public Health Ordinance 1957 and has the primary responsibility and regulatory authority for food control in the country. The CBH with assistance from the Plant Protection Unit and the Veterinary and Livestock Division make routine inspections in four areas, namely, food service establishments, ports of entry, abattoir and public market.

The CBH had seven trained inspectors but due to lack of equipment the inspections were mainly visual. Whenever food borne illness was suspected, the CBH conducted the investigations.

As evident from the roles and responsibilities of the departments listed in this section, integration and coordination are necessary for the efficient use of financial and human resources, for the delivery of an improved food safety system.

Regional Agriculture Health and Food Safety Situation

The fragmented roles and responsibilities of food safety related departments were not unique to Antigua and Barbuda. In several meetings of agriculture health officials such as the Regional Food Safety Initiatives Influencing Hemispheric Trade, September 13-16, 1998 in Jamaica; Caribbean Food Safety Initiative workshop 22-24 March 2000 in St. Lucia and Technical working group on the Caribbean Food Safety Initiative, 27-28 April 2000, it was recognised that the member countries were in a similar This lead to an assessment of situation. Agriculture Health and Food Safety (AHFS) systems and a recommendation for the formation of a coordinating agency to handle food safety matters. At the regional level the idea of a Caribbean Agricultural Health and Food safety Agency (CAHFSA) was born (www.CARICOMstats.org). This agency would give support to National Agriculture Health and Food Safety Agency (NAHFSA) in the countries.

FOOD SAFETY SITUATION 2000-2006

The year 2000 marked the start of concentrated and sustained action towards the development of an integrated food safety system in Antigua and Barbuda. The first intervention was an Inter-American Institute for Cooperation on Agriculture (IICA) sponsored national workshop on Agricultural Health and Food Safety held in Antigua on March 8, 2000. The various departments with responsibilities for AHFS were represented and reported on their roles, functions, resources and collaborations with other departments where the latter existed. At this workshop an IICA document "Model for a Modern Agricultural Health and Food Safety System," was presented and discussed (IICA, The IICA document outlined the 2003). objectives of a national system as:

 a) Protection of crops and livestock from biological, chemical and physical agents that may lead to damage and losses in terms of agricultural production, productivity and marketing as well as the protection of the

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population from such agents in agricultural products for human consumption, when they pose a threat to human health and life;

- b) Improvement of animal health and plant protection in general and of the hygienic handling of agricultural products for human consumption throughout the agri-food chain; and
- c) Regulation of the inputs used in agricultural production.

These objectives brought into greater focus the need to work towards a system that is more coordinated and focused, to improve the food safety services in the country.

On June 19-23, 2000, a seven member delegation from Antigua and Barbuda representing: public sector (agriculture and health-five persons) and private sector (two persons), attended a "Regional Seminar on Food and Waterborne Diseases" held in Antigua, Guatemala. The seminar was organised by the Medical Entomology Research and Training Unit/Guatemala Centre of Disease Control and Prevention (MERTU/G-CDC) with the support and sponsorship of the United States Department of Agriculture (USDA) and Agency International United States for Development (USAID). The aim of the seminar (1) describe the epidemiological was to: situation of Food Borne Disease (FBD) in Central America and the Caribbean in the last four years (1995-1999) and also describe the existing control and prevention programmes, (2) promote integrated strategies to reduce the incidence of FBD in the region to be implemented in a two-year work plan. In articulating the two-year plan for Antigua and Barbuda, the problems related to food safety were summarised as:

- a) Lack of legislation and regulations governing food safety;
- b) Need for improved epidemiological surveillance;
- c) Inadequate intra- and inter-sectoral collaboration;
- d) Lack of public education and awareness in food safety;
- e) Limited laboratory capacity; and
- f) Inadequate technical training in food safety.

Based on the two-year work plan developed at the workshop in Guatemala, on return to the nation of Antigua and Barbuda, the delegation formed an ad hoc food safety committee to bring about greater coordination and collaboration of food safety matters, as well as to realise the plan developed in Guatemala for the six problems summarised above. One of the first activities was to sensitise policy makers about the problems facing food safety in Antigua and Barbuda. A letter summarising the food safety situation, as well as the formation of the ad hoc food safety committee and its terms of reference, was prepared and discussed in debriefing meetings with the Ministers of Agriculture, Health, Tourism, Planning, Finance and the Prime Minister. They were all in favour of the committee and the matter was discussed in cabinet. The next activity was to prepare a press release for the mass media about the Guatemala meeting and the formation of the ad hoc Food Safety Committee.

The third step was to recruit other members to the committee to include: medical and food laboratories, the tourism sector, the Bureau of Standards, the Ministry of Planning, the Veterinary and Livestock Division, private sector and IICA. The committee grew from a seven member to a thirteen member steering committee, with a wider twenty-one member stakeholder committee (Michael et al, 2001). The committee included as far as practical all sectors of civil society and government departments in a cooperative effort to protect residents and visitors from food borne illnesses. Over the six-year period the Food Safety Committee was the leading entity in matters related to food safety in Antigua and Barbuda.

1. Legislative situation

The legislative situation in Antigua and Barbuda was in obvious need of a consolidated food control act, as well as revision of the existing acts. A pro-active effort by the Food Safety Committee in regards to legislation and regulations has been a major contribution to the food safety programme in Antigua and Barbuda. In 2001 FAO launched a project in Antigua and Barbuda on "Strengthening of Food Control and Safety of Fish for Export from Antigua and Barbuda." The outcomes of this project included the improvement of the Fisheries Division programme of assistance to fisher-folk to enable them to re-enter the fish export markets that had been lost, due to new European Union food safety regulations; and the development of a draft proposal for reorganisation of the food control system, with an assessment of the options of a coordinated or centralised agency. The Food Safety Committee facilitated the process by organising stakeholder consultations

and technical working groups. Legislations from Belize and Canada on food control were reviewed in the process.

The Pan American Health Organisation (PAHO) and (USAID) launched a regional Proiect "Modernisation of the Legislative Framework for Animal Health, Plant Health and Food Safety." The main outcome of this project was the updating of two Acts: Plant Health and Animal Health, and the development of new a Food Safety Act. These acts had been sent to WTO for comments as required. They were recently submitted to the Attorney General's office for passing into law. Also developed with assistance from PAHO was an "Implementation Manual for the Management of Food Safety". IICA provided technical assistance for the activities listed above.

2. Training

Two IICA projects addressed the need for training, an essential component to improving food safety in Antigua and Barbuda:

(1) "Assistance to Institutionalise Good Agricultural Practice in the OECS" in 2002-2003. This was funded by the Canadian International Development Agency (CIDA) under the Caribbean Regional Human Resources Program for Economic Competitiveness (CPEC) and included local and sub-regional training in Good Agricultural Practices for producers, packers, processors, exporters and extension officers; development of public awareness and programmes and manuals for GAP certification and laboratory protocols:

(2) "Strengthening Agricultural Quarantine Services" (SAQs), funded by the European Union in 2002-2003. This included regional training workshops in risk analysis for plant and animal health personnel, training for quarantine officers, training of private sector persons to deliver quarantine services under government supervision and the development of emergency disease plans for animal and plant health. The country also received a computer system and software for setting up a Risk Analysis Unit

A PAHO sub-regional training in risk analysis for a wider cross-section of technical officers including Ministry of Agriculture and Ministry of Health from Antigua and Barbuda and neighbouring countries was conducted in 2004. Over one hundred persons were trained in total in the aforementioned activities.

The Central Board of Health with support of the Food Safety Committee conducted regular training of food handlers, street food vendors and food service establishments. Averages of two hundred persons have been trained annually. During this period, members of the Food Safety Committee also increased their technical capability through training in food safety and Hazard Analysis of Critical Control Point (HACCP) under the "Quality Tourism for the Caribbean" project funded by CIDA/CPEC in 2001-2002 in Antigua and Barbuda.

3. Inter-ministerial and intra-ministerial collaboration

The meetings of the Food Safety Committee provided an opportunity for persons from Ministries of Health, Planning and Agriculture, Bureau of Standard, Fisheries, and private sector to meet and plan joint programmes in food safety thus reducing duplication of efforts and allowing better utilisation of the human and financial resources. Reports of the entities represented on the committee also increased awareness of the work of each department and afforded opportunities to build on experiences.

One member of the Food Safety Committee participated in **IICA-CERES** Executive Leadership in Food Safety Series and a requirement of the series was the implementation of a project. The "Salmonella Risk Reduction in Table Eggs in the Caribbean" project, funded by United States Department of Agriculture in 2001-2003 was developed by the Caribbean participants. The Antigua and Barbuda component of this project was an avenue to foster intra-ministerial collaboration. The Veterinary and Livestock Division and the Food and Chemistry Technology Division has been working together to implement the project. The objective of the project was to reduce the prevalence of Salmonella enteritidis in table eggs in six Caribbean countries, i.e. Antigua & Barbuda, Barbados, Belize, Jamaica, Guyana and Trinidad and Tobago. This was accomplished using a "farm to table approach". Commercial egg producers were surveyed for Salmonella in participating countries. Model Agricultural Practices Good and HACCP strategies were developed for egg producers and introduced on farms and in egg packinghouses, with assistance from University of the West Indies Veterinary School and Caribbean Poultry Association. A regular surveillance program for testing commercial poultry farms was established and is now on going in Antigua and Barbuda.

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4. Public education and consultations

The Food Safety Committee organised a National Integrated Food Safety Consultation in April 2001, with representatives from the mass media, farmer groups, Central Board of Health, Ministry of Agriculture, police, agro-processors, Ministry of Health, Ministry of Planning, Antigua Authority (water division), Public Utilities laboratories and the private sector. The feature address was delivered by the Prime Minister of Antigua and Barbuda, and there were addresses by the Ministers of Health and Agriculture and PAHO Advisor on Veterinary Public Health. This event brought legitimacy to the Food Safety Committee and was used to sensitise the participants in food safety issues, report on the situation with regards to food safety in Antigua and Barbuda, as well as, the development of a national food safety mandate. The major food safety activities were broadcasted via mass media to increase consumer knowledge of food safety issues. In addition there were targeted media spots with food safety messages.

Consultations were held over the six-year period to discuss draft Plan Health and Animal Health, Food Safety Acts and related legislation. IICA, under the SAQs project and working in consultation with the Food Safety Committee developed plant and animal health emergency disease plans. Consultation on the formation of the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) were also held. The Cabinet of Antigua and Barbuda made a decision to support CAHFSA and NAHFSA.

CURRENT AGRICULTURE HEALTH AND FOOD SAFETY STATUS

Fisheries Division

The Division is now located in new offices within the Point Wharf Fisheries Complex. There is a laboratory with facilities to perform microbiological, chemical and sensory evaluation. A seafood processing plant seeks improve the quality of seafood to for consumption and the production of value added products. The staff received training in seafood processing. This complex plus the Urlings Fisheries Complex and Parham Fisheries Complex received funding from the Government of Japan. A draft Fisheries Act had its first reading and is currently being amended for enactment this year.

The Plant Protection Unit

In the human resource component, the Unit has remained the same. The Plant Protection Officer has a Ph.D degree in plant pathology and other staff members have received on the job –training.

Veterinary and Livestock Division

There is now a new abattoir and the Division now has four veterinarians. A draft Livestock Control Act had its first reading in parliament recently. The FAO Ambyloma Programme relocated to Antigua in 2003. As a result of the programme tagging of small stock and branding of cattle has been done on the majority of animals on the island. This has improved traceability of the animals slaughtered at the abattoir, as only tagged or branded animals are slaughtered.

Chemistry and Food Technology Division

The Chemistry and Food Technology Division is divided into the Department of Analytical Services and Food Technology Division. There is still insufficient staff and equipment. The technical staff obtained training in seafood testing and works in collaboration with the Fisheries Division.

Pesticides Control Board

The Board has a Registrar. A draft Pesticides and Toxic Chemicals Control Act will soon be submitted to the Ministry of Legal Affairs. There are still no inspectors.

Antigua and Barbuda Bureau of Standards

The Bureau has two staff with Masters Degree training and is now a Statutory body attached to the Ministry of Industry and Commerce.

Central Board of Health

This department and most of the other departments mentioned afore will lose a number of their trained and experienced staff shortly, this due to applications made for the Voluntary Severance Package introduced recently by the government.

During the period 2000-2006 the above departments have been working in closer collaboration but there are still some areas for improvement.

FUTURE ACTIVITIES IN FOOD SAFETY

1. Meeting obligations to international agreements

Antigua and Barbuda needs to establish technical sub-committees for Codex and the SPS agreements, revitalise the Good Agricultural Practices sub-committee and provide technical support to the World Trade Organisation enquiry points in Ministry of Industry and Commerce (Technical Barriers to Trade and Codex) and Ministry Agriculture (SPS). The Food Safety Committee must continue to give technical support to the Antigua and Barbuda Bureau of Standard. Ministry of Health and Ministry of Agriculture and related private sector organisations, with technical assistance from IICA and PAHO in matters related to food safety.

Recruitment of new persons and training of these persons in relevant disciplines, increase of current public awareness programmes and continuation of the training programmes for food vendors, street food handlers and food service establishments are necessary elements for effecting improvements to the system. The strengthening of laboratory services is a very important part of assuring consumers that food offered for consumption is safe.

2. Establishment of a food safety entity

The next major step for the improvement of food safety in Antigua and Barbuda is the formation of a single entity, which will have responsibility for all areas of food safety. As a prerequisite, a detailed assessment of the human, financial and operational requirements of setting up such an entity must be done. The passing of the Food Safety Act, Animal Health Act and Plant Health Act will provide the legislative framework to effect changes in the current system and improve efficiency.

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Year	Total	
2000	218	
2001	195	
2002	214	
2003	243	
2004	244	
2005	197	
Total	1311	

Table 1: Reported Food Borne Cases in Antigua and Barbuda 2000-2005

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Source: Health Information Unit, Ministry of Health, Antigua, 2006

Table 2: Results of Food Service Inspections Jan-June 2006

Food Safety Practices	Percent %
Safe source	39
Poor storage practice	15.5
Unhygienic food preparation practices	32
Poor food storage practices	18
Unsafe serving	7
Poor personnal hygiene practices	59
General concerns	9
Pests/pets in area	19

Source: Central Board of Health, Ministry of Health, Antigua, 2006 (Year)