

## Plant Protection

The Plant Protection Research Unit of the Research and Development of the Ministry of Agriculture & Fisheries is one of the two companion disciplines comprising Crop and Plant Protection Research. It is headed by a Senior Research Director and falls under the general oversight of the Deputy Research Director for Crop and Plant Protection Research.

Through its cadre of specialist scientists Plant Protection provides both research and diagnostic services.

**Research** — The primary role of Plant Protection is to conduct research aimed at finding solutions to critical pest problems. Projects may be of short, medium or long term, depending on the nature of the problem being investigated. Research findings are made public by way of written material or oral presentations at group or individual level. Ultimately the aim of research is to solve farmers' pest problems and enable them to produce more of better quality crops economically.

**Diagnostics** — Through its diagnostic laboratories Plant Protection provides an invaluable service to the agricultural sector by identifying pest and disease specimens and making appropriate recommendations for management. On an annual basis in the region of a thousand specimens are received and processed. The service saves the agricultural sector millions of dollars in crop loss due to pests' damage. The Plant Protection team also makes many on farm visits for diagnostic and advisory purposes.

**Ongoing Research Programme** — Plant Protection's Research programme and projects are pursued in accordance with broad national priorities set by the Ministry of Agriculture. Research is conducted across a wide range of crops of economic importance including vegetable, spices, root and tubers, fruit and tree crops and others. Some specific problems under research include pests of hot peppers, pumpkins and yam; diseases of ginger, hot pepper, papaya, potato, cantaloupe and coco; nematodes on plantain; Citrus Tristeza Virus (CTV) resistant rootstocks evaluation; and evaluation of control measures for honeybee diseases and pests.

### Mission Statement

Falling under the broader mission of Crop and Plant Protection Research, the mission of Plant Protection Research is to generate relevant information and appropriate technologies, for finding cost-effective and environmentally friendly (and sustainable) solutions to critical pest problems affecting Jamaica's agriculture, thus reducing crop loss and contributing to increased yields and earnings.

In pursuing its stated mission, Plant Protection Research embraces and is guided by the universally accepted philosophy and practice of Integrated Pest Management (IPM). This may be defined simply as the application of one or several tactics to reduce pest problems to non-economic damage levels while ensuring minimal hazard to non-target organisms and the environment.

### Plant Protection Disciplines

Plant Protection accomplishes its mission through the activities of several highly specialized disciplines as follows:



#### Entomology

The study and management of insects (and their relatives), which affect economic plants.



#### Pathology

The study and management of plant diseases caused by microscopic parasitic fungi, bacteria, viruses and other related organisms.



### **Nematology**

The study and management of microscopic round worms, which live largely in the soil and feed mainly on underground parts of living plants.



### **Weed Science**

The study and management of weeds (undesirable plants), which affect economically grown plants in fields or pastures.



### **Apiculture**

This is the Science and Art of rearing bees. The section has three distinct functions and is responsible for administrating the Bee Act (1918) through:

1. **Research** - conduct investigations into aspects of beekeeping, which may be deemed necessary for the development of the industry.
2. **Extension** – guide beekeepers in the application of modern beekeeping technologies for better management and greater earnings.
3. **Regulatory** – the administration of the Bees Act (1918) and the Beekeeping Regulations for protection from pests and diseases in the industry.



### **Post Entry Quarantine**

The section has the responsibility of screening plant materials introduced into the country for propagation such as seeds and bud wood. The Section has been playing a very critical role in the Citrus Tristeza Virus (CTV) certification programme under the Citrus Replanting Project. It provides testing services to nurseries for eight organisms causing citrus diseases; maintains stocks of all imported citrus varieties to the Jamaica Citrus Protection Agency (JCPA).

Post Entry Quarantine has responsibility for preventing the development and spread of introduced (exotic) noxious pests and diseases on imported plant material.