Maintenance of Parent Stock

PEQ maintains representatives of 54 citrus varieties of both local and new, imported accessions in a disease-free state. The programme exists to provide the industry with varieties in the event of catastrophes such as disease epidemics, as in the case with citrus greening.

Some varieties in Parent Stock include:

- Calamandin
- Sweet Oranges
- Limes and Lemons
- Mandarins
- Tangelos
- Kumquat

"Unlocking Potentials through Technology....

Securing our Future"

Benefits of planting clean citrus.

- Better growing trees
- The capacity to endure some pathogens
- High yields

Services Offered:

- Production and Provision of certified budwood to the citrus industries (through JCPA-PQ)

The proper management of the plants results in a consistent production of quality, clean budwood for the citrus industry

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POST ENTRY QUARANTINE

MINISTRY OF AGRICULTURE, FISHERIES AND MINING

HORTICULTURE UNIT

CITRUS CERTIFICATION AND CLEAN SEED PROGRAMME

Introduction

The Horticulture team within the Post Entry Quarantine has the responsibility for the screening, propagation, production, and maintenance of all Citrus varieties introduced to PEQ. The team also assists the Seed Health laboratory in the monitoring of grow-out tests conducted on imported planting material.

This is accomplished through the:

- Acquisition/production/importation of clean and certified seeds for production and testing
- Produce of certified budwood for the citrus industry
- Maintain a citrus germplasm bank with at least 80% of Jamaica's Citrus varieties
- Regenerate citrus parent material.
- Maintain plant reservoirs (controls) of pathogens.
- Maintain optimal plant conditions through proper nutrition, media use, pest management, environmental conditions
- Periodic testing of all plants using various diagnostic testing including biological indexing.

Making PEQ's specific media blend. Soil is not used for any works done at PEQ.

Chip Budding

Testing

1. Biological Indexing

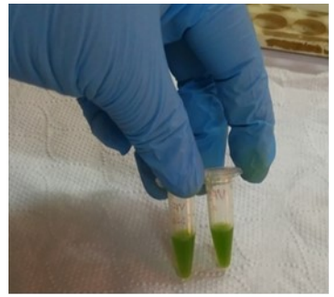
Bio-indexing is a classical approach for screening of plants for pathogens. Various indicator plants are used to identify the different Citrus diseases.

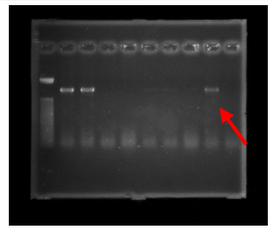
There are several diseases that are screened for: 1) *Citrus tristeza virus*, 2) Citrus Greening, 3) Tatterleaf, 4) Infectious Variegation, 5) Psorosis, 6) Cachexia, 7) Concave Gum, 8) *Dweet mottle virus* 9) Vein Enation

Grafting and reading for symptoms

2. Serology and Molecular techniques

Testing using these methods are done in the Diagnostic lab. Serological (protein) kits as well as DNA/RNA isolations and screening are used for the detection of some pathogens which are un-culturable.





Samples are collected, ground in buffer, and nucleic acid (DNA/RNA) extracted. PCR is run and DNA amplified to determine presence of pathogen.

Budwood Facility (BWF)

The Citrus budwood programme came into existence on the heels of Citrus Greening almost decimating our Citrus Industry in 2011. The budwood facility (BWF) houses clean plants budded with the major scions required by the Citrus Industry.

There are currently 425 trees representing 17 varieties in the Facility.