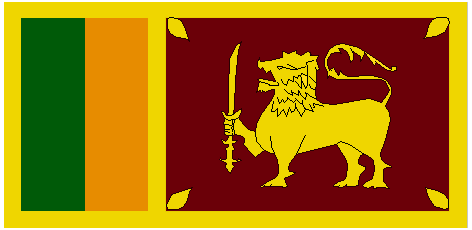
# Link with CAB International towards Agriculture Development in Sri Lanka

**W. M. K. B. Wahundeniya**
**Director**
**Horticultural Crops Research & Development Institute**
**Gannoruwa, Peradeniya**
**Sri Lanka**

www.cabi.org

# Outlook of Sri Lanka




## General

- Geography : 6°-10° North Latitude
- Land Area : 65,525 $Km^2$
- Population : 21.5million
- Ethnicity(%) : Sinhala 73.8%, Moors 7.2%, Tamil 4.6%
- Language(%) : Sinhala 74%, Tamil 18%
- Religion(%) : Buddhism 69, Hinduism 15, Islam 7
- GNP per capita : US$ 2,558
- Industry : Agriculture 12.6%, Service 57.6%, Manufacture 29.8,
- Exports : Fiber, Clothes, Tea, Spicery, Jewelry

# Outlook of Sri Lanka……..

- **At present, agriculture contributes about 13 % to the country's CDI' and employs about 33 % of its workforce.**
- **The government has given the priority to enhance the domestic production in which the success was well demonstrated during the period of world food crisis.**
- **The country has the potential to produce all its tropical fruits and vegetables for its needs and also for export. The policy of the Government is to increase the production of these items to attain near self sufficiency level by 2020.**
- **The cultivation of fruits and vegetables in home gardens will also be promoted by linking the marketing network directly with the producers.**

# The Government's Agricultural Policy

**It has multiple goals -**

**(a) Achieving food security of people**

**(b) Ensuring higher and sustainable income for farmer**

**(c) Ensuring remunerative prices for agricultural produce**

**(d) Uninterrupted access to competitive markets both in Sri Lanka and abroad**

**(e) Farm mechanization**

**(f) Expanding the extent under cultivation**

**(g) Reducing wastage in transit**

**(h) Ensuring environmental conservation**

**(i) Introducing efficient farm management techniques**

**(j) Using high yielding seeds and improved water management**

# Research and Development for Agriculture

**It will be expanded for problems identification and productivity improvement in the sector.**

**Infrastructure facilities of research institutes will be improved.**

**Human resource development will also be strengthened. Extension approaches will be developed using social marketing concepts to add value through information and communication technology.**

**Awareness programmes will be arranged to disseminate research findings among the farmers and the potential farmer community.**

# Solving of National Problems through Research

## Control of Papaya Mealy bug Epidemic *(Paracoccus marginatus)*

- First reported to HORDI in July 2008

Identification – HORDI Entomologists
Confirmation _ Insect Biosystamatist
Calfornia, Dept. Food & Agriculture

# Control Measures

- Recommended chemical and cultural control measures as an immediate solution.

Classical Biological Control

- Imported a Hymenopteran parasitoid (*Acerophagus papayae*) from Puerto-Rico in May 2008.
- Environmental assesements were done through literature review.
- Pre-survey was done at the sites of parasitoide release.
- About 2000 parasitoids were released directly to 10 selected sites.
- About 500 were kept for laboratory multiplication at HORDI

*Acerophagus papayae*

# Multiplication of Parasitoids
## (HORDI)

**Multiplied parasitoids were released at 64 different sites all over the island except North and East.**

**Parasitoids spread very fast to other infested areas from the sites of release.**

# Bean Yellowing Disease

- **Bean (*Phaseolus vulgaris)* is one of the most important and popular vegetables in Sri Lanka. In 1999 a new bean disease, termed 'Bean Yellowing Disease (BYD), was reported from fields in Balangoda. Symptoms were somewhat variable between plants, but included a bright yellowing and mosaic pattern of the leaves, rugosity, stunting of plants and reduced leaf size.**
- **Since its discovery the disease has spread to most bean growing areas. All cultivated bean varieties are susceptible to BYD and it is now regarded as the most serious threat to bean production in Sri Lanka.**

# Diagnostic Tests for BYD

- **Leaf material sent to CABI's Global Plant Clinic (GPC), UK and AGDIA, USA for virus testing, all proved negative more than 20 common bean viruses.**
- **The GPC also undertook sap inoculation tests and direct observation of virus particles using transmission electron microscopy (TEM), both of which proved negative.**
- **Field base studies conducted by HORDI have demonstrated a positive relationship with insects, as plants grown in insect proof cages do not develop symptoms. Tests have also been undertaken to rule out soil bore aspects of the disease, including soil pathogens and nutrient deficiencies, The diseases was not found to be seed transmitted nor transmissible by mechanical inoculation.**

CABI Ref: DR10028
Ref: Bean Consultancy, Sri Lanka

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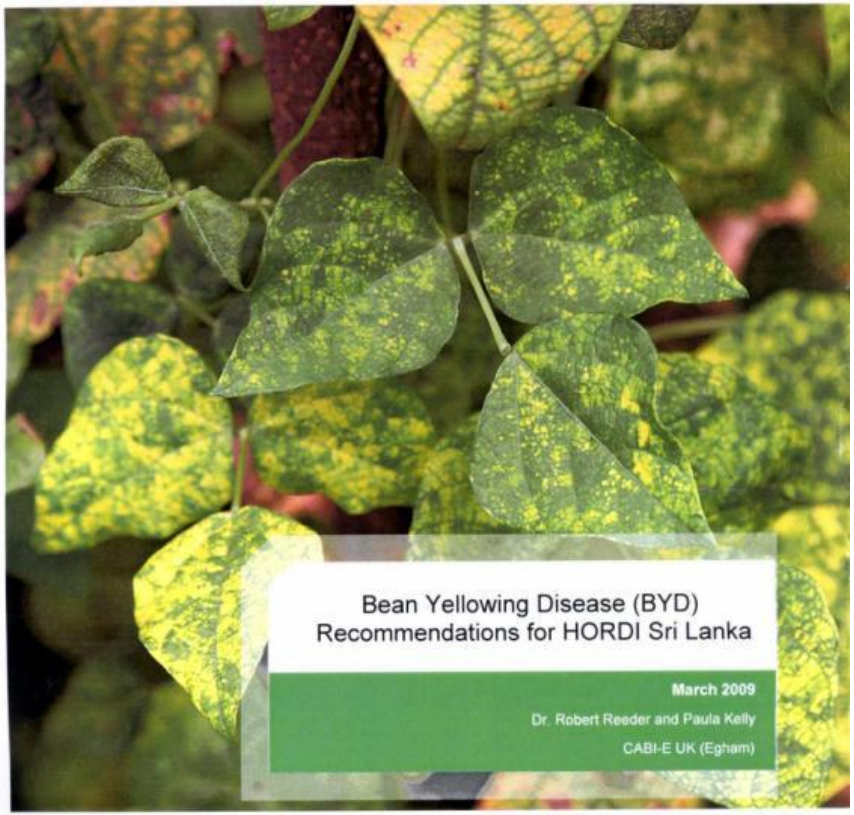


## Diagnostic study by CABI Scientist ( Ms. Paula Kelly & Mr. Robert Reeder) proposed

**Causal factor:**
**Horse gram yellow mosaic virus**
**(Sri Lanka: 2009 Hg YMV)**
**1st report in Sri Lanka**

**Vector: White fly (*Bemisia tabaci)***

**Other countries reported – India**

**An IPM package was developed including chemical and cultural measures**

# CABI Link with Central Library, Sri Lanka

- **Books & Journal collection - 16683**
- **Membership - 323**
- **Readers – 3000/year**

- **Free access to CABI information products**
- **Discounts on purchase of CABI information products**
- **Free microbial identification service**
- **Free policy and project development support**
- **Links to CABI's research centres around the world**
- **Global networking opportunities (with public, private and civil society organizations)**

# Crop Clinic Programme in Sri Lanka

- **It was initiated after Global Plant Clinic (GPC) training which was held in Sri Lanka during 2009 with the Financial & Technical assistance of CABI**

  **(Dr. H. M. Ariyarathna, Additional Director/HORDI has coordinated the programme)**

# Progress of Crop Clinic Activities

- **Up to now 142 permanent crop clinics were formed in 12 districts.**
- **10 fact sheet were distributed on pests & disease management.**
- **Under this program 12 AIs were selected from each district and trained them as plant doctors.**
- **Technical assistance was given by research scientists of Department of Agriculture.**

# Crop Clinic Programme in 2013

## (Conduct - Mr. P. T. Bandara, Deputy Director / Plant Protection Service)

- Survey was carried out to identify problems & constraints of existing system.
- Practical training is required at regulator intervals on identification of pests & disease.
- Giving publicity through mass media.

## Planned activities

- All AIs' of each district will be trained as plant doctors.
- Responsibility was given to research & extension officers in different regions to solve current problems.

# “Going Green” (Sri Lanka) Project

- **“Going Green-Empowering Communities towards Sustainable Agriculture” Is European Union funded project in which CABI is working with two other partners i.e. Welthungerhilfe (WHH) a lead agency and Sewa Lanka Foundation as implementing partner. Six project associates include Department of Agriculture (DOA), Horticultural Crops Research & Development Institute (HORDI) , RARDC-Kilinochchi and other government departments.**
- **Project started on 1st Dec. 2011 and will end on 31st Oct. 2014 (35 months). Project target area covers entire divisions of Thunukai and Mathai East where 18000 people are living in 113 villages in 34 GNs. The project revolves around five results**

**(Mr. Daud Ahmad Project Manager - Going Green)**

# Progress of “Going Green” Project activities

- **Four permanent CCs have been established in four Agricultural Instructors’ ranges of project area -Paandiyankulam, Paalinagar (Manthai East DS), Thunukkai and Yogapuram (Thunukkai DS).**
- **Mobile CCs are being conducted in villages where farmers have poor access to agrarian services centers.**
- **Module 1 & 2 training for plant doctors (How to become plant doctor) – completed**

# Progress of “Going Green” Project activities…….

- **Strengthening of agriculture extension systems and exchanging of livelihood opportunities.**

- **34 Agriculture Extension Assistants (AEAs) will be absorbed by the Dept. of Agrarian Development (DAD), Cooperatives and Enterprises at the end of the project.**
  - **35 AEAs were recruited.**
  - **12 days of basic competency training have been provided them to master on subject.**
  - **Follow up weekly meeting is on progress.**

# Progress of “Going Green” Project activities…….

- **4000 farmers participating in Farmer Field School (FFS) for rice and horticulture gained expertise .**
- **Agrochemical usage was reduced by 35% and adapted innovative agricultural techniques.**
  - **Training of Trainers (ToT) - training on Integrated Pest Management (IPM) and Post Harvest Management (PHM) for paddy – completed.**
  - **Follow up training Workshop for IPM and PHM - completed**
  - **ToT training on IPM for Chilli and Onion is on progress.**
  - **Regular FFS on Paddy and Chilli is going on.**





**Memorandum of Understanding (MOU)**

**On**

**Handing Over the Equipment Procured under "Going Green" project**

Between, The Project Manager, 'Going Green', Sewalanka Foundation and the Director of the Horticultural Crop Research and Development Institute, Department of Agriculture, Gannoruwa – Peradeniya (hereinafter "HORDI")

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**MOU signed on 19.11.2012**

**Under this project Lab Equipments , Lab Chemicals, Computers and Cameras will be provided to improve laboratory facilities at HORDI, Gannoruwa and RARDC, Kilinochchi.**

# Plantwise Plant Doctor Training Workshop


- **Organized by Plantwise, CABI in collaboration with the "Permanent Crop Clinic Committee Programme" of the Sri Lanka**

# Objectives of the training workshop

- **Upgrade knowledge and skills of selected national trainers of permanent crop clinics**
  - **Module I**
  - **Module II**
- **Further accelerate the training of plant doctors**
- **Strengthening the plant health system of the Sri Lanka by conducting crop clinics**

# Participants with resource personals & DOA officials

# Resource personals

**Mr. Abdul Rehman,**

**CABI Country Coordinator**

**Dr. Wade H. Jenner**

**Plantwise Programme support Manager**

# Training workshop in progress

# Thank You