Rubber tree is subjected to various pests and diseases as any other agricultural crop.

The first disease was detected in 1900 and since then more than 100 maladies have been reported worldwide.

Several tools are available about the causative agents, diagnosis and the management of these pests and diseases.
Main objective....

New Diseases Reported and Maladies Reached Epidemic Proportions

The most threatening disease among them

Corynespora Leaf Fall
Corynespora leaf fall cont..

- Presently CLF is found in all most all rubber growing countries in Asia & Africa
- Latest spread is reported from Myanmar
- Many of the outstanding clones in world have been affected by now
  - RRIM600
  - RRI105
  - RRIC103
  - RRIC110
  - PB260
  - GT1
  - IAN873
- The latest clone affected is IRCA 18, one of the popular clones in Africa

Origin and the development of *C. cassiiicola* epidemics in the natural rubber growing countries in African and Asian continents.

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Only hope: Breeding for Resistance

• Familiarize with the symptoms for early detection of the deadly disease
• Essential to pay attention for disease surveillance exercises
• Give preference for “Corynespora Resistance” during your breeding programme and release only the resistant clones to stakeholders

Other new maladies spread during the recent past

• Papaya mealy bug (Paracoccus marginatus)
  New insect attack spread during an unusual heavy dry spell

• Target leaf spot (Thanatephorus cucumeris)
  A fungal disease declared as a quarantine pest

• Sclerotium collar rot (Sclerotium rolfsii)
  Nursery disease spread due to mal practices

• Foot Canker & Sudden wilt (Nattrassia mangiferae)
  Secondary infection on cracks resulted due to heat injury
Pests & Diseases Reached Epidemic Proportions

- Cockchafer grubs
  A malady reported in early 20th century reached epidemic proportions in early 21st century

- Basal rot
  A disease which reported in early 1900s spread widely during the new millennium

- Epiphytic attack
  Sporadic attack reached the epidemic proportions recently

Maladies created an unrest among stakeholder

- Unusual spread of WRD in immature clearings
  New threat spread with the introduction of Mucuna cover

- Abnormalities shown in new breeds as genetic characteristics
  Unusual buckling of leaves/knots and warts
This infestation was reported in Sri Lanka in 2009 creating an unrest among rubber growers.

Other hosts affected were Papaya, Araliya, Avocado, Rambutan, Jack, Bread fruit, Mango, Eggplant, Alastonia, Ornamental plants, Vegetables and Weeds.

Reported from India in 2010.

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Papaya mealy bug (Paracoccus marginatus)
New insect attack spread during an unusual heavy dry spell

- papaya mealy bug attack has been noticed on rubber seedlings, young clearings & mature fields.

- The most conspicuous symptom is the presence of cotton like masses on the above ground parts.

- The result is leaf fall, dieback & abnormal growth of axillary buds.

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Nature of damage
All infestations on rubber were associated with infected papaya trees.

Hadakeliyagala Estate, Ambanpitiya

Chemicals recommended

- Imidacloprid 20% (one ml in 1l of water)
- Dimethoate EC 40% (one ml in 1l of water)
- Thiamethoxam 25% (1-2 g in 1l of water)

Biological Control

- Natural enemies are lady beetles, lacewings and hover flies.
- Commercially available papaya mealybug destroyer: *Acerophagus papayae*

Weather conditions play a significant role in spreading the mealy bug attacks (long dry spells in February/March/April with high temperatures)
Cockchafer Grub Outbreak

A malady reported in early 20th century reached epidemic proportions in early 21st century

- Causative agents: grubs of Cockchafers

  - Grubs destroy the rootlets, lateral roots and finally tap root causing the death of the plants
  - Buckling and yellowing are the above ground symptoms

New maladies spread during the recent past cont...

Management strategies

- Combination of chemical and mechanical control system is recommended

  - Chemical control
    - Chloropyrifos 40 EC (3 ml in 1.5 l of water per plant)
    - Imidacloprid 20EC (1.5 ml in 1.5 l of water per plant)

  - Mechanical control
    - Use of light traps are recommended
Light trap Collection of adult cockchafer within three months breeding season

June July Aug Sept Oct Nov Dec Jan Feb March April May

numbers

Lepidiota Anomala Lacnosterna Passera Apogonia

Mechanical control..... continued,
New maladies spread during the recent past cont...

**Patch Canker/Basal Rot** (*Pythium* sp.)
A disease which reported in early 1900s spread widely during the new millennium

**Diagnosis**

- The most conspicuous symptom is the exudation of latex at the collar region.

- Latex between the bark and wood coagulates under the bark forming latex pads.

- When the disease reaches advanced stages bark decays and the trees are fallen.

**Management**

- Affected area should be cleaned thoroughly by removing the latex pads and rotten tissue.

- Then a fungicide solution should be applied at this region (Eg: Mancozeb 5g in 1 litre of water)

- Application of a wound dressing is recommended on the treated surface

Regenerating roots after treatment
Unusual spread of WRD in immature clearings

Unforeseen threats detected with the implementation of new technologies

- Presently *Mucuna* is considered as the best cover crop for the rubber plantations and it is cultivated worldwide.
- However, recently it was found that woody roots unique to *Mucuna* are capable of sustaining the disease and responsible for spreading WRD to neighboring rubber plants.
- As a result, vast patches of dead trees in immature clearings have been created.

**Disease avoidance:** Do not establish *Mucuna bractitata* in clearings with "Fomes" history.
Towards Disease Free Rubber World
Let Us Join Our Hands Together