

# Country Presentation (Philippines)

**WORKSHOP ON BIOSECURITY IMPLEMENTATION OF SOUTH AMERICAN LEAF BLIGHT OF RUBBER IN THE ASIA-PACIFIC REGION**

**12-16 JANUARY 2015**

**BANGKOK THAILAND**



# Introduction

## Rubber status – acreages and distribution (2013)

| Region | Hectares |
|---|---|
| I - CAR | 27 |
| II – Cagayan Valley | 152 |
| IV-A - CALABARZON | 435 |
| IV-B - MIMAROPA | 766 |
| V - Bicol | 4 |
| VI – Central Visayas | 1,018 |
| IX – Zamboanga Peninsula | 86,033 |
| X – Northern Mindanao | 6,929 |
| XI – Davao Region | 3,533 |
| XII - SOCCSKARGEN | 40,916 |
| XIII - CARAGA | 11,548 |
| ARMM | 34,115 |
| **TOTAL** | **185,476** |



# Rubber Production and Future Planting

***National Production*** (Source:  Bureau of Agricultural Statistics)

➢Last year alone, production of rubber was estimated at 425, 705 metric tons (MT).  This was 7.71 per cent more than previous year's level of 395,237 MT.

➢ With RA 10089 (Philippine Rubber Institute Act of 2010) and the High Value Crops Development Program of DA-  rubber  production in the country is being intensified and expected to grow by 3.7 percent in the next 10 years.



# Rubber Production and Future Planting

***Future Planting***

- North Cotabato Governor expressed the province's commitment to expand the production of rubber

- 25 million seedlings  good for 50,000 hectares, are due for budding in their province.

- There are large potential areas suitable for rubber in the Philippines Can be utilized in watershed rehabilitation projects



## Impact on rubber if SALB incursion – population involved and yield reduction

- Introduction of this disease into the country will cause great economic damage
- Rubber plant mortality
- Increase in production cost
- Loss of income and employment



## Biosecurity strategy to curb the SALB incursion

- Pre-export inspection and treatment
- Strict phytosanitary import requirements
- Inspection system at points of entry
- Post-entry quarantine



# Existing Steps to prevent entry of SALB

- **Laws and Regulations**

  DANR Administrative Order No. 13 series of 1949

  RA 10089 approved on May 2010 creating rubber institute to develop Philippine rubber industry

  DA Administrative Order No. 3 series of 2013

- **PRA, Import requirements and pest management**
- All importations of rubber planting materials are subject to PRA
- Importation of rubber plants/plant parts from SALB affected countries is prohibited except in specific cases or conditions
- Determine quantity of planting materials to be imported for specific purposes
- Plants to be treated with surface sterilant and effective fungicides



# Existing Steps to prevent entry of SALB

- **PRA, Import requirements and pest management**

- Import consignment accompanied by Phytosanitary certificate
- Non Hevea plants/planting materials subject to Post-Entry Quarantine Station upon arrival

SALB management : through inspection, surface sterilization and post-entry quarantine



# Existing Steps to prevent entry of SALB

## Inspection at entry, sampling method and size

- Examination of accompanying documents
- Verification of consignment identity
- 10 % of the consignment; representative samples are drawn at random

## Surveillance system

- Detection survey will be done a month after the importation and will continue for one year
- Distance from the point of entry and the number of sampling points will be determined depending on the number of rubber plantings in the area

## Diagnostic for SALB

- PEQS has a diagnostic facility for identification of disease causing organisms,
- Access to laboratories in Universities, research institutions



# Existing Steps to prevent entry of SALB

## Control preparedness

• development/establishment of eradication plan is still in process but will include enforcement of domestic plant quarantine, conduct of delimiting survey of the affected areas, disinfection and destruction procedures and information dissemination

## Awareness and Capacity Building

•Training programs will focus on inspection, diagnostic and disinfection procedures, surveillance, eradication and control measures and monitoring/evaluation surveys



# Planning on SALB pest- free area

- **Border control – diagnostic**
- Border protection network shall operate at airports, seaports and road entry points.
- PQS has a fairly equipped laboratory used for conducting modern methods according to the international requirements/recommendations.
- Establishment of additional well equipped/modernized diagnostic laboratories with highly qualified staff .
- Establishment of high containment area with separate units for Mycology, Entomology, Virology, Bacteriology.



# Planning on SALB pest -free area

## Surveillance – maintaining pest freedom

- Training of role players on rubber culture, pest identification and procedure for the survey
- Devise a mechanism to conduct  detection, delimiting surveys as well as monitoring
- Sampling procedures (method, sample size, duration, areas of coverage, etc.)
- Diagnostic procedures
- Reporting procedures- (BPI –Regional Coordinator –Field Enumerators-rubber growers-DA,LGU,NGA ,SCU)



# Planning on SALB pest -free area

**Surveillance data management and sharing**

- Reporting and sharing disease information with global information systems
- Conclusions, outputs and recommendations from surveillance activities to be submitted to the decision-makers of DA

**Pest reporting**

- Collecting information about occurrence of regulated organism as well as audits of places of production is an official action of the Bureau of Plant Industry (PQS and Crop Protection Division).



# Data Needed for Surveillance/Monitoring and Reporting

- Year
- Month
- Region
- Province
- Municipality
- Barangay
- Number of farmers affected
- GPS Coordinates
- Crop
- Variety
- Growth Stage
- Pest
- Natural Enemies
- Area planted
- Area affected
- Per cent infection/infestation
- Remarks



# Awareness and Capacity Building

- **Usage of Training module**
- **Status on translation**
- **Training of implementer**
- **Awareness program – conduct of seminars re SALB** (no formal training conducted but discussion with co-employees/colleagues has been done, sharing of information through video presentation to PQOs and Regional Crop Protection monitors)
- Info Campaign re SALB scheduled this January 2015 involving all regions of the country (Crop Protection monitors)



# Sharing of Information

- Type of sharing – information materials such as leaflet, videos through seminars, training
- Scope of data that can be shared
- Obligation in reporting



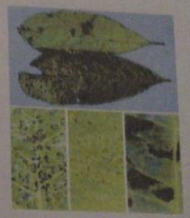
References:
1. www.ppqs.gov
2. www.fao.org
3. www.plantwise.org

For more information and inquiries please contact:

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# SOUTH AMERICAN LEAF BLIGHT (SALB)



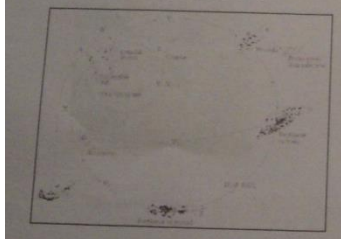
Pathogen: *Microcyclus ulei* (P. Henn.) v. Arx

Order: Ascomycetes
Family: Dothideales
Synonyms: *Dothidella ulei* (Henn. 1904)
*Melanopsammopsis ulei* (Henn.) Stahel 1917
*Aposphaeria ulei* Henn. 1904
(conidial state: *Fusicladium macrosporum*) Kuyper 1912

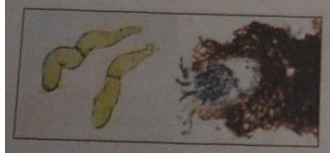
## What is South American Leaf Blight (SALB)

SALB is a leaf disease of rubber plant caused by a fungus called *Microcyclus ulei*. Historically, SALB had destroyed several rubberplantations established in the 1930s in Central and South America. Until today, it is the most important factor limiting a vibrant rubber planting industry in tropical Central and South America where the disease is endemic. The Asian rubber growing countries that produce more than 90 percent of the world's natural rubber are very concern of the threat of SALB. This is because the climatic conditions in the major rubber producing countries are conducive to serious SALB infection.

## LIFE CYCLE OF *M. ulei*



*M. ulei* produces three types of spores i.e. conidia, pycnospores and ascospores.



## Symptoms

The symptoms vary with the age of the infected leaves. SALB can be recognized by its symptoms on young and mature leaves. The young leaves are deformed and numerous dark irregular lesions are present on the lower leaf surface. On mature leaves, prominent raised black bodies resembling warts occur on the upper leaf surface. This disease will result in leaf defoliation, reduction in growth and yield and even death of infected plant.
The fungus produced abundant spores on young and mature leaves. The spores which remained alive for some time are responsible for spreading the disease. The disease can be spread through movement of infected materials and contamination of travellers and their belongings.

When infection density is high, these spore-producing lesions coalesce, the leaves turn reddish and premature leaf fall is observed. The petioles, young twigs and young fruits of susceptible clones can also be infected. When conditions are favourable for disease development and in highly susceptible clones, infection and rapid re-infection of young leaflets can cause successive defoliations which lead to dieback of terminal twigs and branches and ultimately to death of young trees.





## Host Range

*M. ulei* infects only *Hevea* species. There are 11 *Hevea* species but *M. ulei* infects only five species (*H. brasiliensis, H. spruceana, H. guianensis, H. benthamiana, H. camporum*). It does not infect any other plant. On Hevea rubber, *M. ulei* infects the young aerial part of the plant. Infection is most common on young leaves; however leaf petioles, young stems, inflorescences, flowers and young fruit are also infected.

## Our responsibility to prevent the spread of SALB

We can prevent the spread of this disease by taking appropriate precautionary measures:

1. Travelers who visited a rubber farm in Central and South America should take precautions to rid themselves and their belongings of living spores (taking bath and washing used clothing in transit countries).

2. Travellers should not bring home any parts of the rubber plants especially green leaves.

3. Rubber planters should be vigilant of SALB and should contact relevant authorities if SALB is suspected, e.g. Department of Agriculture or Rubber Research Institutes.



# Thank you for your attention