

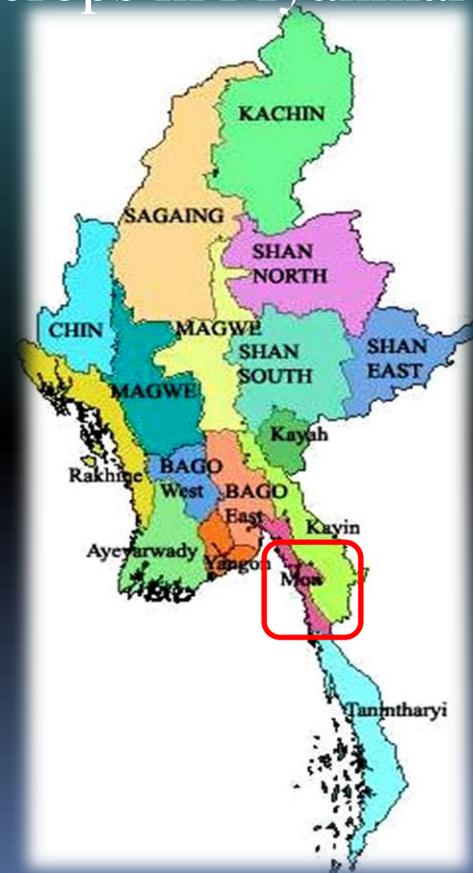
MYANMAR

Country presentation

Workshop on Biosecurity Implementation of South American
Leaf Blight of Rubber in the Asia-Pacific Region
12-16 January 2015

Introduction

- cultivate - since 1876 - Mon State
- southern to eastern - Myanmar considerable rubber acreage
- Rubber - extensively cultivated industrial crops in Myanmar
- 71 % rubber production - for export





State/Divison	2013/2014 cultivated area (ha)
Kachin	30197.98
Kayah	14.57
Kayin	90301.21
Chin	3.64
Sagaing	4308.50
Tanintharyi	125431.58
Bago	44938.87
Magwe	32.39
Mandalay	154.25
Mon	194422.67
Yangon	15873.68
Rakhine	14865.99
Shan (North)	32688.66
Shan (East)	40701.21
Shan (South)	440.89
Ayeyarwady	10946.15
Total	610067.61

(DICD 2014)

Rubber Production in Myanmar

Year	Planted Area (000' ha)	Yield (kg/ha)	Production (000' MT)
2005-2006	226	594.27	64
2006-2007	295	596.6	73
2007-2008	380	638.07	89
2008-2009	428	677.79	93
2009-2010	463	670.46	112
2010-2011	504	686.2	128
2011-2012	543	754.48	149
2012-2013	581	770.16	164
2013-2014	609	763.49	177




Structure by Size of Holdings (2014-2015)

No.	Category	Area (ac)	No. of planters
1	Under 2 ac	25453	13229
2	(2 to 5) ac	82039	23566
3	(5-10) ac	213080	29429
4	(10- 20) ac	263444	17550
Smallholder		584016(40.6%)	83774(87.5%)
5	(20- 30)ac	140269	5554
6	(30- 40) ac	66763	1929
7	(40-50)ac	60724	1354
8	(50-100)ac	106865	1614
Medium size		374621(26.0%)	11677(12.1%)
9	(100-500)ac	203832	1226
10	(500-1000)ac	88678	130
11	Above 1000 ac	96289	56(1.8%)
Large Scale		38889(27.0%)	186 (1.8%)
12	Unclassified	88495(6.0%)	--
	Total	1435931	95737

30 year Master Plan

Year	Planted Area (000' ha)	Production (000' MT)
2015-2016	648	178.3
2020-2021	729	255.8
2025-2026	850	301.3
2030-2031	972	359.2

❖ The rubber tree *Hevea brasiliensis* is susceptible to several diseases, their severity varying with the climatic conditions and cultural practices.

❖ According to the plant protection section from Applied Research Center for Perennial Crops (ARCPC), the following diseases were found in Myanmar.

Leaf Disease found in Myanmar

Leaf Disease	Nursery	Field	Severity
Phytophthora leaf fall (<i>Phytophthora</i> sp.)	+	+	Severe
Colletotrichum leaf disease	+	+	moderate
Gloeosporium leaf disease	+	-	moderate
Alternaria leaf spot disease	+	-	mild
Oidium (or) powdery mildew	+	+	Severe
Bird's eye spot leaf disease (<i>Drechslera</i> spp)	+	-	severe
Corynespora leaf fall (<i>Corynespora cassiicola</i>)	+	-	moderate
Leaf disease (<i>Setodochium</i> spp)	+	+	moderate
Algae spot (<i>Cephaleuros</i> spp)	+	+	moderate

Stem and Branches Disease found in Myanmar

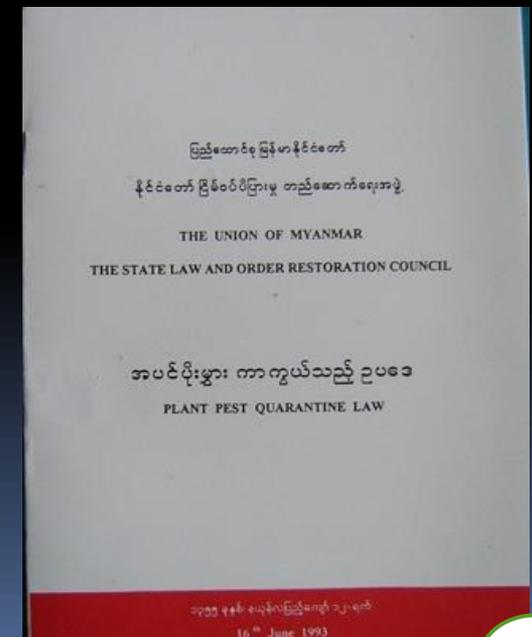
Stem and Branches Disease	Field	Severity
Pink disease (<i>Corticium salmonicolor</i>)	Â	severe
Black stripe (or) Bark Rot (<i>Phytophthora</i> sp.)	Â	severe
Phytophthora patch canker	Â	severe
Mouldy rot (<i>Ceratocystis</i> sp.)	Â	Moderate
Ustulina stem rot (<i>Ustulina</i> sp.)	Â	Mild
Pathogenic dieback (<i>Gloeosporium</i> sp.)	Â	Moderate
Secondary dieback (<i>Gloeosporium</i> sp., <i>Botryodiplodia</i> sp., <i>Diplodia</i> sp., <i>Ovulariopsis</i> sp., <i>Beltrania</i> sp., <i>Alternia</i> sp. etc.)	Â	Moderate

- ✓ Presently Myanmar is free from South American Leaf Blight
- ✓ This is based on the level of interaction between Myanmar, and Asian Countries in such aspect as economic and cultural relationship, the spread of South American Leaf Blight to Myanmar is possible.

Existing steps to prevent entry of SALB

○Laws and regulations

- ❖ The plant pest quarantine law was formulated in 2013.
- ❖ This was under reviewed by the FAO expert in 2006
- ❖ Some changes and amendments in line with International Plant Protection Convention (IPPC) are in progress



○PRA, Import requirements and pest management

- required import certificate from the Department of Agriculture (DOA)
- when on arrival by importing shall be subject to inspection by DOA
- required Phytosanitary Certificate from country origin

○ Inspection at entry, sampling method and size

- Visual Inspection



- Laboratory Inspection- incubation, rearing and culturing



■ Post-Entry Inspection

Duration of PEQ inspection

- nursery stock : less than 2 years
- flower bulb, strawberry plant, seed potato , seed sweet –potato : less than 1 generation
- Rose : until first flower harvest

sampling method - random sampling

Size

Areas - rubber estates, smallholdings, nurseries

Coverage - within 3 km of entry points

Procedure -

nursery - all trees

mature rubber - one sampling point - 5 ha

Frequency - monthly

○ **Surveillance system**

- Survey when it is intercepted at an entry point
- surveillance system -on going process

○ **Diagnostic for SALB**

- Can do at the Plant Protection Section of Department of agriculture and Applied Research Center for perennial crops

○ **Control preparedness**

- Eradicate infected trees, resistance varieties, burning the trees

○ **Awareness and capacity building**

- public seminars, farmer field's school, field day, talks with local planter

Planning on SALB pest freedom area

○ Border control- diagnostic

- Check - 11 border check points
- however only Yangon and Mandalay International air port can diagnostic SALB and other check point can also done visual check
- Country should have appropriate laboratory diagnostic tools and SALB expert in border .



○ Surveillance – maintaining pest freedom

- Biology of SALB, its survival time, rate of reproduction, mean of dispersal, availability of host plants should be investigated for establishing pest freedom area.

○Surveillance data management and sharing

- Surveillance data management and sharing should include scientific name of pest and host, family/order, location, date of collection, name of collector, date of identification, date of verification and references and infected growth stage of rubber

○Pest reporting

- Pests survey about occurrence of SALB data shall report to NPPO

Awareness and Capacity Building

○Usage of Training module

- Training on rubber nursery and management
- Training on rubber tapping and processing
- Training on rubber clone identification
- Training on rubber pest and disease control

○Status on translation - Myanmar and native language

Sharing of information

Type of sharing : Agri-business journal, Farmer Channel
farmer 's field school, field day and workshop
on MRPPA

Obligation in reporting : symptom or resemblance in symptoms of SALB are detected quickly report to Applied Research Center for perennial corps who in turn after confirmation of the detected symptoms of SALB shall report to the plant quarantine service.

ACKNOWLEDGEMENTS

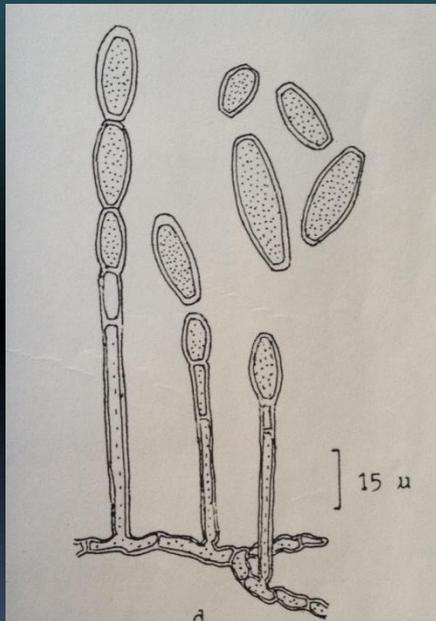
- The Study Delegation would like to extend our appreciation and thanks to FAO for sponsorship of the workshop program .
- The knowledge and experience will preserved and transfer to the rubber planter, smallholding.

THANK YOU



Seasons

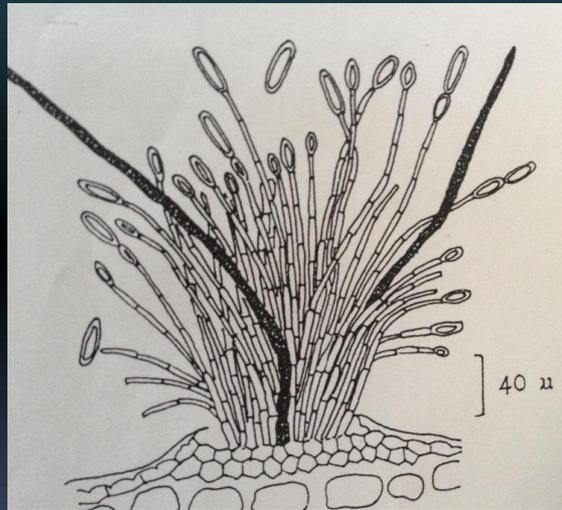
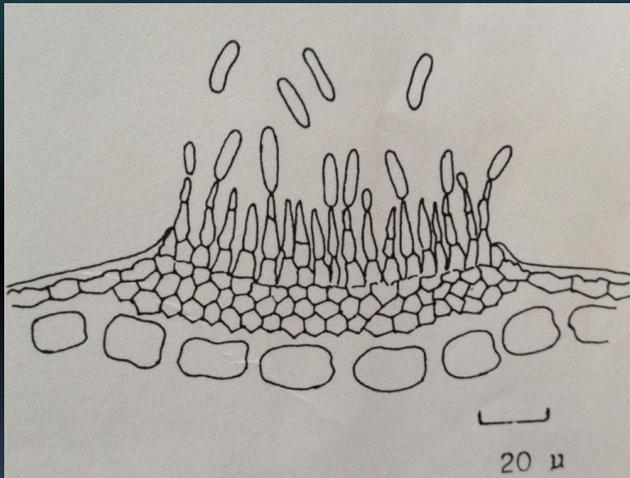
Seasons	Months	Temperature	Rainfall
Summer	February- May	29.4 - 43.3 HC	
Rainy	May-October		40-200 inches
Winter	November-February		



Oidium sp.

Drechslera sp.

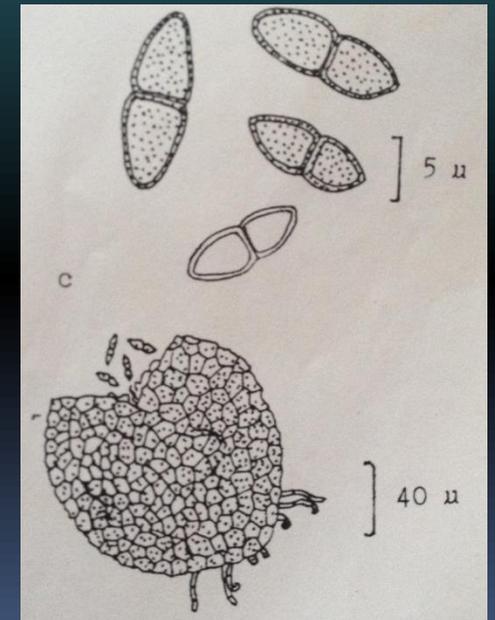
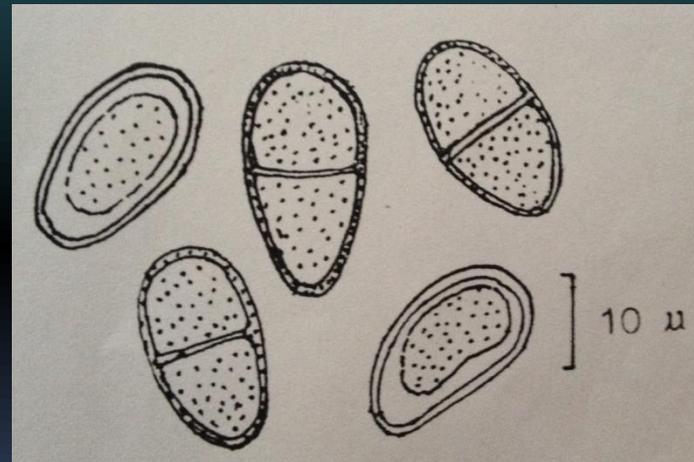
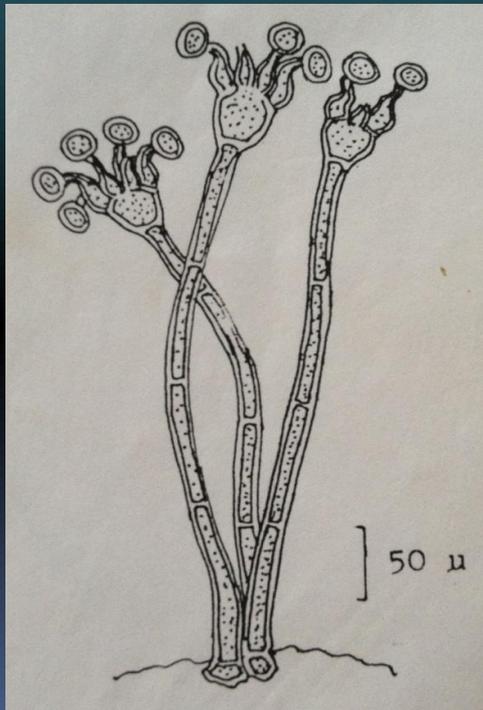
Colletotrichum sp.



Gloeosporium sp.

Setodochium sp.

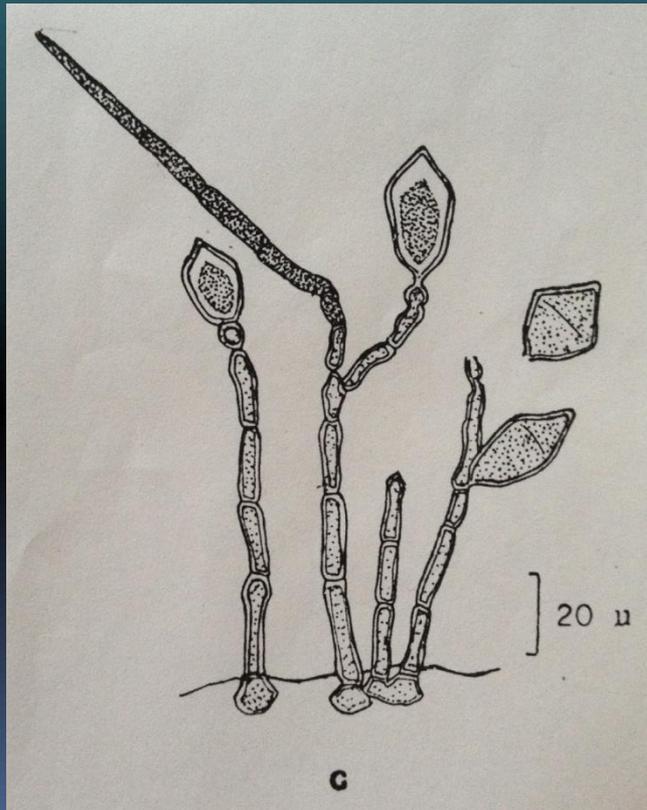
Alternaria sp.



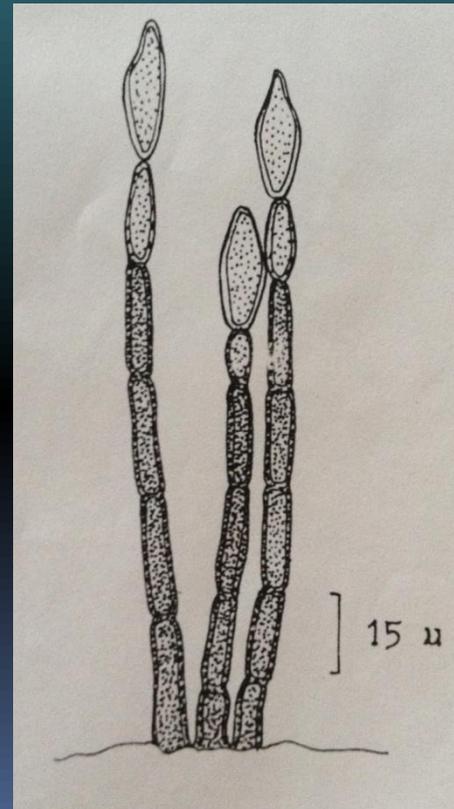
Cephaleuros sp.

Botryodiplodia sp.

Diplodia sp.



Beltrania sp.



Ovulariopsis sp.

